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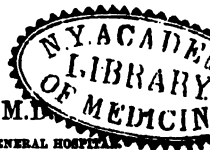
WITH SPECIAL REFERENCE TO

THE MEDICAL EXAMINATION OF RECRUITS, AND THE
DETECTION OF DISQUALIFYING AND FEIGNED
DISEASES.

BY

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ADOPTED BY THE SURGEON-GENERAL FOR ISSUE TO MEDICAL
OFFICERS OF THE ARMY.



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TO
BRIG.-GENERAL W. A. HAMMOND, M.D.
SURGEON-GENERAL U.S. ARMY,
ETC., ETC., ETC.

The Head of his Corps

WHOSE ADMINISTRATION MARKS A NEW ERA IN THE
MEDICAL DEPARTMENT OF THE ARMY,
THIS LITTLE WORK,
WHICH OWES ITS EXISTENCE TO HIS FRIENDLY SUGGESTION,

IS

RESPECTFULLY INSCRIBED

BY

THE AUTHOR.

Y. A. S. S. I. S. S. I.

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PREFACE.

THE need of a work on enlisting and discharging soldiers, written with especial reference to the wants of the military service, at the present time, renders an apology for the appearance of this book unnecessary. Tripler's Manual, and Henderson on the Examination of Recruits, although very excellent, are scarcely complete enough to suit the present emergency in military affairs. The deficiencies in these, the only American authorities, are not supplied by the works of foreign military medico-legal writers,—our military system differing in many material respects from the military systems of other nations. I have availed myself freely of the labors of such of these foreign writers as were accessible, whenever their material was suitable to my purpose, and have drawn upon my own observation and experience,—which have not been inconsiderable.

Much of the subject-matter of a work of this kind has necessarily been so long the common property of military medico-legal writers as to render it impracticable for me to credit it to the original authorities. I have endeavored to make suitable acknowledgment, as I went along, for the aid derived from others.

The disqualifications for military service are very much the same in all countries. The lists given in this work are derived from the report of the Medical Board (of which I was a member) convened at Washington to determine the

mental and physical infirmities which should exempt under the Enrolment Act; from the *Aide-Mémoire medico-legal de l'Officier de Santé de l'Armée de Terre, &c., par F. C. Maillot et J. A. Puel*; from the *Mémoire sur le Choix des Hommes propres au Service militaire dans l'Armée de Terre, par M. Beaupré*; from the *Code des Officiers de Santé de l'Armée de Terre, par P. A. Didiot*; and from the regulations of the English and Prussian Army Medical Departments.

I need hardly suggest a fact to the reader which he will readily see and appreciate for himself,—that this work is not intended for professional experts, but for such examining surgeons, medical officers, and recruiting officers as have not had, heretofore, an opportunity to become informed on these subjects. For the benefit of the last named, at the suggestion of a distinguished officer on duty in the War Department, I have appended a glossary of medical terms used in the work,—a glossary which indicates rather than explains the meaning of the terms.

McDOUGALL GENERAL HOSPITAL,
FORT SCHUYLER, N.Y., July, 1863.

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ON
ENLISTING
AND
DISCHARGING SOLDIERS.

INTRODUCTION.

IN the formation of an army, upon the efficiency of which may depend the safety of the state, two principles of the utmost importance must be kept in view: one, that no man, a *proper subject* for military duty, be exempted; the other, that the service be not encumbered with men unfitted for it by reason of mental, moral, or physical infirmities. It is the purpose of the recruiting officer in time of peace, when the strength of the army is maintained by voluntary enlistments, as it is of enrolment and conscription acts in time of war, to obtain the one and exclude the other. To promote

the continued efficiency of the army, these principles must be constantly applied, rendering it necessary, on the one hand, to use the utmost skill and ingenuity in detecting feigned, factitious, aggravated, and exaggerated diseases, and, on the other, to discharge those disqualified by infirmities which escaped the observation of the examining surgeon, or who have become disabled by accidents or diseases incident to military life. Upon the faithfulness and thoroughness with which the duties of enlisting and discharging soldiers are performed, depend the numerical strength of the army, its health, its efficiency in battle, and especially its mobility. How far the success of military movements is influenced by these circumstances, is apparent enough. The multiplication of *armes de précision* has not supplied legs to armies or obviated the necessity for physical power in individual soldiers. War, in modern times, consists so much in the science of making men march for the purpose of striking an unexpected blow on the enemy, that the efficiency of soldiers depends greatly on their capacity for executing long marches with comparative ease. Marshal Saxe and General Foy, both of whom had great military experience, do not hesitate in stating that the

secret of war lies in the power of marching,—namely, in the strength of the legs.*

The successes of Napoleon's military operations were due in no small degree to rapidity of combinations and celerity of movements, or, in other words, to the physical efficiency of his troops. Reverses began when the necessities of the emperor and the exhaustion of the matured portion of the population required that the conscription be enforced with more rigor and the army recruited from a levy of conscripts under twenty years of age, less carefully selected. The capacity to endure fatigue and long marches is not less a requirement now than it was to the Roman soldier, who marched, carrying a load of sixty pounds, twenty miles and more a day.† Railroad communications may and do powerfully assist in military movements; but their aid is local and of limited application, whilst physical stamina is universally applicable. The tendency in these days is to decry the necessity for a high standard of physical efficiency in the constitution of an army, and to exaggerate the importance of improved arms.

There is another aspect of the question, too

* Marshall on Enlisting and Discharging Soldiers, page 10.

† Vegetius i. 10; Liv. iii. 27.

important to be disregarded,—the pecuniary. “To put a soldier in the field costs the Government nearly four hundred dollars;”* to maintain him in the hospital costs not less than twenty-five dollars per month, besides his pay and allowances. The sick and the disabled, derived from any source soever, are serious encumbrances to the movements of an army: they cannot be abandoned; they must follow the army or be removed to a general hospital; and attendants and ambulance trains become necessary to their care and comfortable transportation.

It follows, then, from the consideration of the military necessities and the pecuniary results, that the application of the second of the two propositions with which this chapter opens is more important to the interests of the Government. It is an unwise policy to restrict within doubtful limits the causes of exemption from military service. In a country like this, where the general standard of health and physical stamina is high, and the number of cases of incomplete or arrested development of chronic, incurable, and constitutional diseases are in small proportion to the whole

* *A Treatise on Hygiene*: W. A. Hammond, Surgeon-General U.S. Army.

population, it becomes the less necessary to include in an enrolment or conscription cases admitting of reasonable doubt as to their sufficiency to fulfil all the requirements of the military service.

Under the provisions of the "act for enrolling and calling out the national forces," approved March 3, 1863, the determination of the physical and mental fitness for military duty devolves upon the Board of Enrolment, whose decision is final. The importance of a rigid attention to the two great principles enunciated in this introduction will appear in the results of these examinations; for if, on the one hand, injudicious laxity shall be the rule, the army will be burdened with useless recruits; on the other, if a wise discretion shall govern, and drafted men be exempted whose powers, mental and physical, are inadequate, the army will be fitted for the work in hand.

The examining surgeon of a recruit for the regular army certifies on honor that he has carefully examined the recruit agreeably to the general regulations of the army, and that it is his opinion that *the recruit is free from all bodily defects or mental infirmity* which would in any way disqualify him for the performance of military duty.

The principal object of the surgeon, in the examination of recruits or drafted men, is not to select what is in every way good, but to *reject* what is absolutely unfit.* In a general view of a nation, excluding the two extremes of age, it would appear that all men have the physical capacity for soldiers; but, when examined in detail, a large percentage are discovered with disqualifying defects fatal to their efficiency. A drafted man, wishing to escape the just obligation imposed by the Government, may feign or produce a disease to be exempted, and a volunteer may dissimulate one to be accepted. The purpose of the examining surgeon, therefore, seems to be to discover disqualifying defects, and to determine, negatively, the fitness of a man for the life of a soldier before he enters upon the consideration of the positive qualities of development, symmetry, and general aptitude. Whilst the French, as also the Prussian, regulations are calculated to obviate the simulation of defects, and the English to prevent fraud by the dissimulation of infirmities, ours should be directed to the accomplishment of both these objects. According to this view of the subject, it is obviously most proper to commence a

* Jackson. Economy, Discipline, and Formation of Armies.

treatise on enlisting and discharging soldiers with an account of disqualifying infirmities, whether mental, moral, or physical. A great deal of repetition is avoided by this arrangement; for a disqualification which would exempt a man from draft, or for which he would be rejected if a recruit, or which he might simulate or dissimulate, is usually a cause, real or pretended, for discharge from service. Assuming this view to be correct, I shall consider—

1. Real disqualifications for military service, comprised in three classes: mental, moral, physical.

2. Pretended disqualifications; which will constitute a separate section on feigned diseases.

3. Qualifications of recruits, and enlisting soldiers.

4. Discharging soldiers.

The list of diseases and infirmities which disqualify for military service, contained in the regulations of the Bureau of the Provost-Marshal General,* being an official and authoritative statement on the subject, each of the diseases or infirmities therein enumerated will be placed at the head of the corresponding class in the following arrangement.

* Regulations for the Government of the Bureau of the Provost-Marshal General of the United States Washington, 1863.

SECTION I.

REAL DISQUALIFICATIONS FOR MILITARY SERVICE.

CHAPTER I.

MENTAL INFIRMITIES THAT DISQUALIFY FOR MILITARY DUTY.

MANIFEST IMBECILITY OR INSANITY.

THE disqualifications under this head, except as feigned diseases, rarely come under the observation of the examining surgeon, or Board of Enrolment. The more distinctive forms, as *Acute Mania*, *Monomania*, *Melancholia*, &c., are sufficiently well characterized; but there are disqualifying mental states much more obscure, which require close observation and knowledge of the signs, symptoms, and pathology of insanity, to be detected with certainty, especially in the incipient

stages. I need hardly observe that any of the forms of mental alienation mentioned above, as also *Idiocy*, *Cretinism*, *Imbecility*, and *Dementia*, constitute absolute disqualifications for military service. Between these well-marked states and that degree of intelligence sufficient for the soldier there are numerous gradations and varieties. The term *imbecility of mind* is usually employed by writers on the subject of enlisting soldiers, and intended to apply to Idiocy, Imbecility, and Dementia, rather than to the higher types of Insanity. *Idiocy* is a congenital condition; *Cretinism*, although not to be diagnosed usually at birth, is hereditary; *Imbecility* is a minor degree of mental deficiency than idiocy; and *Dementia* is the result of diseased action supervening upon a healthy mental state, or a sequel of more acute forms of mental derangement. In the lower forms of idiocy the functions of animal and organic life are greatly impaired: the idiot is below the plant, and is scarcely alive to external impressions.* Cretinism is not frequently seen in this country; and it is scarcely necessary to enter into a description of it. Hitherto it has

* Manual of Psychological Medicine: Bucknill & Tuke, page 103.

existed mainly in Switzerland, Valais, Savoy, Italy, and Piedmont, where it is endemic; but it is also sporadic, "an occasional case being found, presenting the characteristics of genuine Cretinism, in the cities of various countries." A very well-marked case is now in the Fort Schuyler General Hospital. Imbecility of mind is a term admitting of wide application. From the highest to the lowest order of mental soundness there are an infinite number of degrees of intelligence. The same variations are found in mental deficiency. It is not always easy, in a given case, to determine whether the intelligence is, or is not adequate to the performance of military duty. In the lower forms, imbeciles produce nothing, and all their movements, both intellectual and moral, are aroused only by impulses from without. They reply correctly; but they must not be asked too many questions, nor required to make responses which demand reflection or are contrary to their habits.* Others display considerable shrewdness, and are constantly indulging in jokes: they pass for half-witted people, whose droll behavior and ready *repartees* create amusement.† Imbeciles possessing

* Esquirol. *Maladies mentales*, p. 452.

† Bucknill & Tuke, *op. cit.* p. 118.

this degree of intelligence may perform the duty of soldiers, as far as it is merely mechanical, with exactness, but they are, of course, unfitted for any duty requiring discretion or judgment. They are, moreover, peculiarly liable to insane impulses, to commit theft and other crimes, although competent to the performance of many of the ordinary duties of life and able to take care of themselves.

Senile Dementia, occurring at a period of life when men cease to be employed in the military service, need not detain us. In its behavior it does not differ from the disease arising from other causes than the degenerations of age. Dementia is divided by Dr. Prichard* into several stages: 1st, loss of memory without impairment of the reasoning faculty; 2d, abolition of the reasoning faculty; 3d, the stage of incoherence; and, lastly, loss of instinct and volition. When primary, it is the first stage of the mental disease of the patient, and, without having any well-marked sign of alienation, he only gives evidence of loss of memory, power of attention, and executive ability. At this stage Dementia may escape

* Treatise on Insanity, p. 88. Also article "Insanity" in Cyclopædia of Practical Medicine, vol. i. p. 824.

detection by the examining surgeon, but it is positively disqualifying. Idiocy, Cretinism, Imbecility, and Dementia are, usually, easily enough recognized by want of harmony and vacuity in the expression, obvious deficiencies of mind, imperfect development of body, ill habits, limited but imperious instincts, and various hallucinations and delusions.

The various forms of Monomania, irregular in their manifestations, and consisting of perversion of the affections and disposition, with or without deprivation of reason, are sometimes exceedingly obscure. *Suicidal Mania*, *Kleptomania*, *Erotomania*, *Pyromania*, and *Dipsomania* belong to this class; but as all of them, except the last-named, occur rarely, they need not be considered in this treatise. Whenever present, they are disqualifying infirmities. *Dipsomania* is a more frequent form of monomania. The distinction between this, as a form of mental disorder, and the merely physiological condition of drunkenness, is not very clear. Cerebral disease, hereditary tendency, or some disorder of the nervous system, not due to the abuse of alcoholic stimulants, exists in the one case, whilst the other is a habit merely.* Chronic Alcoholism is a cause for

* Bucknill & Tuke, op. cit. p. 219.

rejection or exemption, but, as it is a purely physical condition, will be considered under that head.

Nostalgia is a form of mental disease which comes more frequently under the observation of the military surgeon. "Nostalgia, when it is of long duration and resists the means of moral treatment, and has produced a profound alteration of the organism, is a case for reform."* Considered as a mental disease,—and there can be no doubt that the primary phenomena of this state are mental,—it belongs to the class *Melancholia*. The extreme mental depression and the unconquerable longing for home soon produce a state of cachexy, loss of appetite, derangement of the assimilative functions, and, finally, disease of the abdominal viscera,—in fact, the objective phenomena of the typhoid state. Young men, it is said, are the most usual subjects of this disease, especially young men belonging to races and people remarkable for their attachment to home and country; but in our army married men of middle life are more liable to it, particularly those given to solitary vice or the victims of spermatorrhoea. As Nostal-

* Didiot, *Code des Officiers de Santé*, &c., second part, p. 465. Paris, 1863.

gia is not unfrequently fatal, it is a ground for discharge if sufficiently decided and pronounced, but, obviously, as a condition incident to service, cannot be considered a cause for exemption.

CHAPTER II.

MORAL INFIRMITIES THAT DISQUALIFY FOR
MILITARY DUTY.

THE standard of qualification in respect to moral character is extremely low. The military service, in time of peace, presents so few attractions that men of good reputation, having other means of earning a livelihood, avoid it, and the ranks are filled up from the idle, the dissolute, and the unfortunate. Frequently, indeed, amongst unthinking civilians, a good moral character is considered unnecessary in a soldier, and a man is held to be fit for the military profession who is worthless for every useful purpose in civil life. No one at all familiar with the insubordination, discontent, and bad habits which one evil-disposed man may induce in a company, will question the propriety of some standard of qualification in this respect. An ordinance of the 21st of March, 1832, requires the substitute or volunteer to produce a certificate of good character from the mayor of the commune in which he last resided before he can be admitted into the

French army. This measure had its origin in the necessity for preserving the morals of the young conscripts, of whom the army is principally composed, from contamination by association with men of profligate character. In the act for the enrolment of the national forces, it is wisely provided that no man convicted of a felony shall be permitted to serve in the army; that is, he is not exempted, as others are, by reason of mental or physical disqualifications, but is ignominiously debarred the privilege of serving the country.

The conviction of a felony is, therefore, a ground of rejection under the enrolment act. If the fact were known, it would be a cause of rejection in the examination of a recruit for the regular army, but not for discharge from service.

Desertion and mark of branding with the letter "D" are properly considered in connection with the subject of moral character. It is the custom in the English service, and sometimes in our own, to brand deserters with the letter "D" under the arms in the axillary region, on the hip, and more rarely on the cheek. A man faithless to one flag will not be true to another; and hence evidence of this kind, of a want of principle or

bad moral character, will be a cause for rejecting a recruit enlisting in the regular service or an already organized volunteer regiment, but will not constitute an exemption from the draft.

Under this head should be included *obstinate*, *persistent*, and *incurable Malingering*. The experience of all military surgeons is quite decided as to the disqualifying nature of this vicious habit. There are some simulators so resolute in maintaining their consistency in the character of invalids, so skilled in imitating the signs and symptoms of disease, and so thoroughly intractable, that nothing remains but to discharge them from the service. Malingering is not a ground of exemption from the draft, but is a cause for rejection in the examination of recruits for the army and for an organized volunteer regiment, or in the examination for re-enlistment. No malingerer should be discharged unless all known means of inducing him "to give in" have failed. (See, on this subject, the chapter on feigned diseases.)

CHAPTER III.

PHYSICAL INFIRMITIES THAT DISQUALIFY FOR MILITARY DUTY.

I. GENERAL DISQUALIFICATIONS.

7. Decided feebleness of constitution, whether natural or acquired.

8. Scrofula or constitutional syphilis, which has resisted treatment and seriously impaired the general health.

9. Habitual and confirmed intemperance and solitary vice, in degree sufficient to have materially enfeebled the constitution.

5. * * * * Cancer. * * * *

THESE general disqualifications consist of imperfect or arrested development, feebleness of constitution, cachexies, extreme youth or old age, too great or too small stature, and insufficient or excessive weight. These are correlative subjects, which may be considered in their connected relations. Imperfect or arrested development and feebleness of constitution are usually dependent upon some cachexy; youth and old age, too great and too small stature, and insufficient or excessive weight, either are accompanied by, or produce, feebleness of constitution.

It has been the experience of all wars, that

a man whose development is incomplete or arrested, either on account of youth or some inherited cachexy, so far from being useful, is only an encumbrance to an army. "Not only is he incapable of performing the duty required of him, but his frequent attacks of indisposition demand the services of others in taking care of him."* McLeod,† referring to the recruits who joined the army in the Crimea early in 1855, says, "Many of them were raw boys, ill-conditioned, below the standard age, undeveloped in body, unconfirmed in constitution, and hence without stamina or powers of endurance. Often selected on account of their precocious growth, at once launched into the turmoil, unwonted labor, and hardships of a siege in which the strength of full-grown men soon failed, they were quickly used up. * * * The hospitals became filled with such unpromising patients, whose 'wizened look' of premature age was remarked by the most casual observers." During the last three years and five months of the Peninsular War—the period when the greatest activity prevailed—the mean strength of the British army amounted to

* A Treatise on Hygiene. Hammond, op. cit.

† Surgery of the Crimean War, p. 97.

61,511 men, and the sick to 13,815, being 22½ per cent. There is, perhaps, little doubt that a large portion of the inefficient troops were unfit in consequence of inadequate physical strength more than from actual sickness. The mean ratio of inefficiency from wounds did not exceed 1½ per cent.*

Feebleness of constitution is one of the most frequent causes of rejection in the French army. The mean annual number of conscripts examined during the years 1831, '32, '33, amounted to 126,669, of which number 11,007 were exempted from serving on account of this defect,—nearly 9 per cent.† So great and constantly increasing evil did this become, that the Emperor addressed a letter, in 1855, to the Minister of War, calling his attention to the large number rejected on account of feebleness of constitution, and to the great loss which thereby resulted to the army and to the treasury.

“I have had occasion to remark,” says the Minister of War, in his instructions concerning the draft in 1835, “according to the accounts which have been rendered to me by the Inspectors-General, that many of the young

* Marshall, op. cit. p. 12.

† Aide-Mémoire, Médico-légal, p. 6.

men included in the contingent were returned from the corps a short time after their incorporation, because they were seized with infirmities contracted before they entered the service. The Councils of Revision will recognize, I hope, of how much importance it is to the treasury and to the army to put a stop to a state of things which has not even escaped the investigation of the Chambers. They cannot show too great a care and scrupulousness in the choice of young soldiers. They should, with reference to this, read the 13th article of the law, which says, Those whose infirmities render them improper subjects for service are exempted. Now, it would be badly interpreting the law, it would be violating its text and disregarding its spirit, to send under the garb of men those who bring upon the State useless expense, and who drag a miserable existence from hospital to hospital."*

These quotations apply not only to imperfect and arrested development due to tender age or disease, but also to a class, happily not numerous in our country, which encroaches on the border ground of disease but yet presents no evidence of constitutional taint

* *Aide-Mémoire*, op. cit. p. 41.

or chronic structural change,—men of sedentary life and occupation, not positively ailing, but wanting in vigor of constitution and activity of organic functions. These fall easy prey to the accidents and hardships of military life. When this *feebleness of constitution* is apparent and decided, notwithstanding suitable age and height, it constitutes a *cause of rejection and exemption from draft*.

The cachexies which incapacitate for service include a wide range of constitutional and visceral diseases,—scrofula, cancer, scurvy, constitutional syphilis, malarial, lead, and mercurial poisoning, and the peculiar physical condition induced by the abuse of ardent spirits.

Scrofula, if well marked, accompanied by swelling of lymphatic glands, enlargement of joints, flabby muscles, languid circulation, and dull, lifeless complexion, renders a man unfit for service.* The rule for rejection on the ground of scrofula is not absolute. There are instances—not very numerous, however—of boys who have outlived the early impressions of that cachexy, and have grown up into able-bodied, effective men. *Cæteris paribus*, the appearance of cicatrices about the neck, or the

* Aide-Mémoire, op. cit. p. 120. Tripler's Manual, p. 108. Marshall on Enlisting and Discharging Soldiers, p. 121.

evidence of scrofulous diathesis, should cause more thorough investigation, and in all cases of doubt it is better to reject or exempt.

Cancer, or the *cancerous cachexia*, is so palpably a cause of exemption, rejection, and for discharge from the service, that it is only necessary to allude to it.

Scorbutus will almost never be presented to the examining surgeon for rejection or exemption. It may probably come up as a question of discharge from service; but, as it is readily curable by appropriate dietetic and medical treatment, if no permanent organic change has occurred, it is not a sufficient cause.

Constitutional syphilis, the secondary and tertiary forms of syphilis, shown by eruptions of the skin and mucous membranes, and affections of bones, muscles, and joints, constitute an absolute exemption from draft, or a cause of rejection; for, notwithstanding some cases are readily amenable to treatment, the constitutional infection is almost never cured, and will be surely roused into activity by the exposure and unfavorable hygienic conditions to which the soldier is subjected. *The effects of the long-continued action of malaria, of mercurial or lead poisoning*, provided the cachexy be well marked and the constitution thoroughly

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involved, will constitute a case for exemption from the draft. The exclusion on this ground for the regular service or for an organized volunteer regiment is more rigid.

Habitual drunkenness disqualifies a man for military service, and is a cause for rejection in the examination of a recruit for the regular army or for an organized volunteer regiment, but does not constitute a case for exemption under the enrolment act, unless accompanied by lesions of the digestive apparatus, liver, kidney, or brain. It is not an adequate cause for discharge from service except when so long standing and so habitual as to have induced serious structural changes. Drunkenness is the principal cause of most of the military offences of which soldiers are guilty and for which they are punished, and is the source of many physical disqualifications disabling them from duty and rendering a discharge from the army ultimately necessary. The examining surgeon should therefore look carefully to this as a disqualifying infirmity. The habitual drunkard is easily enough recognized by the obvious signs of that condition: congested watery eyes (ferrety), *acne rosacea*; loaded, tremulous tongue; tumid belly; impairment of the functions of animal life, shown

by the unsteady gait, trembling hands, and atrophy of the muscles of the inferior extremities; disorder of the digestive organs; piles; and, finally, weakened intellect, limited power of attention, and spasmodic modes of utterance and expression.

But there is a state of cachexy or discrasia produced by another vice, still more unfortunate than drunkenness,—*masturbation*. In all of our general hospitals there are numerous instances of men reduced to a most pitiable state of physical weakness and mental imbecility by this vice,—a large proportion of them married men, separated for the first time from their wives. *If of long standing, maintained by inveterate habit and accompanied with marasmus, loss of memory and power of attention, it constitutes an absolute disqualification for military service.* The external signs of this habit are so well known that it is not necessary to enter into a detailed enumeration of them. The chief marks by which an examining surgeon may recognize it are, emaciation, mental feebleness, organs of generation small, ill developed, and prepuce elongated. The frequent connection of masturbation with disordered intellect suggests the reflection whether, indeed, it is not frequently a *result* rather than

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a cause of dementia. As it occurs in the army, however, it is due rather to the deprivation of regular and uniform sexual intercourse, to the interrupting an established habit, which nature resents by extraordinary periodical excitement of the genital organs.

Extreme youth and old age, especially the former, have been adverted to as disqualifying conditions in connection with the subject of feebleness of constitution. Under the voluntary system large numbers of boys of from fourteen to eighteen years, immature and feeble, have been admitted into the volunteer regiments, most of whom at no distant day found their way into the hospitals. The other extreme has been as frequently observed,—men of advanced age, many of sixty years and upwards. The present Regulations of the Army fix the minimum at eighteen years of age and the maximum at thirty-five, exception being made in the case of musicians, who may be under the minimum, and soldiers re-enlisting, who may be over the maximum. In the British service the minimum is eighteen years of age; in the French and Prussian, twenty years; and in the Austrian, nineteen. The act for enrolling and calling out the national forces wisely fixes the minimum age at twenty years.

The impolicy of enlisting boys is not only evident during the immediate operations of the war, but in the subsequent life of the nation. In the wars of the First Empire, and in their after-influence upon the French population, both results were thoroughly shown. More than half of the conscripts drawn for the army for the campaign of 1809 were under twenty years of age. After the battle of Leipsic, Napoleon called upon the Senate to fill up the decimated ranks, to which they interposed some objections. "Shame on you!" cried the Emperor. "I demand a levy of three hundred thousand men; but I *must have grown men: boys serve only to fill the hospitals and encumber the roadside.*" The more important after-effects of this enrolment of the youths of the population were exhibited in the depreciation of the general stamina, height, and physical efficiency of the nation. Between 1816 and 1835, out of 5,818,944 young men called for, 1,076,130 were exempted either because of a defect of stature or diverse infirmities.* All French writers on this subject are quite emphatic in their opposition to a minimum age less than twenty; and the practice of the French Gov-

* Aide-Mémoire, op. cit. p. 6.

ernment is at present in accordance with their opinions. Dr. Fallot* says, "Conscripts at the age of eighteen have not attained their full growth; and medical men are well aware that the complete development of the human body requires an exemption from great fatigue, abundance of healthy nourishment, undisturbed sleep, and a tranquil mind,—a concurrence of circumstances which never occurs in the army." Cochet† is not less decided in the expression of his opinion "that recruits at eighteen years of age are commonly unfit for the duties of the army, not only in time of war, but even in a period of peace." "It was necessary, at the period of which we speak, to take conscripts at the age of eighteen years. These unfortunate children performed prodigies of valor at Lutzen and Bautzen, but they could not resist the fatigues and privations inseparable from the work of an army. They soon overloaded the hospitals; and then burst forth that terrible typhus which so cruelly mowed down the ranks of the army."‡

* *Mémorial de l'Expert dans la Visite sanitaire des Hommes de Guerre.*

† *De l'Opération médicale du Recrutement et des Inspections générales.*

‡ *Aide-Mémoire, op. cit. p. 12.*

I add to these opinions on this subject the high authority of Surgeon-General Hammond :*—"Physiologically, there can be no doubt on the subject. The youth of eighteen years is immature; his bones are slender and deficient in the necessary amount of earthy matter to give them the proper hardness; the epiphyses are not yet incorporated with the shafts of the long bones, and in the ribs are still cartilaginous; the joints are undeveloped, not having yet expanded sufficiently to give firmness and strength to the limbs; the muscles are soft, and have by no means acquired their full power, as is shown by the investigations of Quetelet and others; the chest has not attained its full capacity, and the contained organs have not yet reached the maximum point of efficiency."

The practical result of the loose system which has obtained in filling up the ranks of a company, during the past two years of the rebellion, is shown in the considerable number of youths in the military hospitals. Three boys, respectively fifteen, sixteen, and seventeen years of age, have been discharged from the Fort Schuyler Hospital by civil authority. There are now twelve in that hospital from fourteen to

* Treatise on Hygiene, op. cit.

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eighteen years of age, and ten have been discharged for infirmities mainly due to tender age. There can be no doubt as to the positive disqualification of a minimum age less than twenty years.

The Regulation of the Army fixing the maximum age at thirty-five is a judicious one; but forty-five is the maximum established by the enrolment act. Any age greater than forty-five is a positive disqualification for military service. The number of men admitted into the hospitals, disabled by this cause, is an opprobrium of the recruiting service. It is not unusual to find them more than sixty years of age, toothless, almost sightless, rheumatic, and worn out,—suffering, indeed, from the failure of their mental and physical powers, due to the near termination of life. Besides the actual, there is a premature old age, equally disqualifying, which I have already alluded to in connection with feebleness of constitution.

The Regulations of the Army fix the *minimum stature* at five feet three inches. A maximum has not been established thus far in any country. Indeed, the military authorities have been most desirous of increasing the stature of their soldiers; and this spirit reached its culmination in the mania of Frederick for obtaining recruits for his tall battalions. Mon-

strosities in this direction are scarcely more able to perform the duties of soldiers than the highest grade of dwarfs. Since the enrolment act and the recruiting regulations do not limit the stature as to height, the needful restrictions remain with the examining surgeon; for a greater stature than six feet three inches is usually accompanied by such obvious deficiencies of structure as to constitute a sufficient cause for rejection or exemption. Great height alone, especially if there is a corresponding development, cannot be considered a ground of exemption. The medium height is the standard by which the physical capacity of men should be judged, as it is the stature best fitted for all the purposes of military life. Very tall men are more or less deficient in energy, and incapable of enduring fatigue.* The preponderance in height has been obtained at the expense of the development of the chest and of the muscular system. They are easily exhausted, and subject to hernia, to varicocele, to a varicose condition of the veins of the inferior extremities, and to intractable varicose ulcers. The rule of practice for the examining surgeon to be deduced from these observations is, *to reject or exempt very tall men (six feet three inches,*

* Marshall, Aide-Mémoire, op. cit. p. 3.

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*and upwards) whose chests are narrow and contracted, whose muscular systems are imperfectly developed, and who betray a tendency to hernia or to a varicose condition of the veins.**

Allied to the question of stature is the scarcely less important one of weight. In the perfect man there is a complete correspondence between the weight and stature. All deviations in either way are departures from the normal standard, and constitute deformities, which, if excessive, become disqualifications. A greater weight than two hundred and twenty pounds, unless accompanied by corresponding height and muscular sufficiency, is a disqualification for the military service. Ordinarily, a man weighing more than two hundred and twenty pounds, or less than one hundred and ten, should be exempted or rejected in the examination under the recruiting regulations. *Great obesity* constitutes an absolute disqualification for military service. On this subject Hutchison remarks, "All weight under eleven stone and a half (161 lbs.) does not interfere with the vital capacity, but, on the contrary, it increases with the weight up to this point; but above this weight, so far as our table goes,

* Consult on this subject the admirable *résumé* in Surgeon-General Hammond's *Hygiene*, p. 26 et seq.

viz., fourteen stone, the weight interferes with the vital capacity in the relation of rather more than one cubic inch to the pound."

In addition to the statistics already given, which illustrate the questions arising in the first part of this chapter, I subjoin some others, derived from the records of the English and United States recruiting service, which show how far the principles advanced have received a practical application.

Out of 13,949 town and country recruits examined at the central recruiting station, Dublin, 3032 were rejected for various disqualifications, 298 for unsound health, 123 for muscular tenuity, 16 for weakness of intellect, and 167 for various cachexies, of which scrofula was the chief.

A very admirable series of statistics of the recruiting service in the United States is to be found in the Medical Statistics of the U. S. Army from 1839 to 1855, compiled and arranged by Assistant Surgeon (now Medical Inspector) R. H. Coolidge. Although the numbers are not large, the definiteness and certainty of the returns give special value to them.

Out of 16,064 examined in the year 1852, 13,338 were rejected for various disqualifications, leaving 2726 only enlisted. In account-

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ing for this result, the character of the material presenting for enlistment in our army in time of peace must be considered. Of this number rejected, 1806 were under size (imperfect or arrested development); 732 were too old; 106 were rejected for moral disability, 1965 for intemperance, 630 for unsound constitution (cachexies), and 16 for mental disability.

The experience of this rebellion is illustrating these questions on a more gigantic scale than any previous war. In a series of 10,991 discharges for all causes examined by me at the Adjutant-General's Office, with reference to this question, 860 were discharged for feebleness of constitution, scrofula and syphilis,—the former, whether due to age or disease, greatly preponderating over the two latter.

II. SPECIAL DISQUALIFICATIONS.

In entering upon the subject of the special disqualifications for military service, it is necessary to premise that many of the diseases and injuries enumerated, for which men may claim exemption under the enrolment act, are also those which substitutes may dissimulate to be accepted, or which soldiers may feign, produce, aggravate, or exaggerate to procure a

discharge from the service. The chapter on feigned diseases contains an account, more or less complete, of that class of disabilities and the methods of detecting them: here I propose to consider the physical disqualifications for military duty, without reference to the question of their reality.

It is a principle from which it is neither just nor expedient to depart, that no man should be accepted or drafted who may be made efficient by the performance of any considerable operation, or by a long course of medical or surgical treatment. This principle is especially applicable to our service, the enrolment being for the maximum period of three years. An important surgical operation may not only endanger a man's life, but during the course of the subsequent treatment he will prove a source of expense to the government, without any compensating advantage. A man enlisted or drafted should have the health and stamina for immediate service, without reference to some future time when he may become efficient.

The surgeon, in examining recruits, drafted men, and especially substitutes, should bring all his mental acumen, habits of observation, and knowledge of diseases to the investigation. It will be far safer to assume the attempt at

deception in every case than to permit a genial view of human nature to modify the necessary severity of his judgment. His suspicions, confined to himself, should not interfere with the kindness of his manner, his patience, or the thorough performance of his duty.

For the more convenient treatment of the special disqualifications for military service, I propose to arrange them in eight classes,—viz.:

1. Organs of special sense, and accessory apparatus.
2. Head and spinal column, and cerebro-spinal nervous system.
3. Neck and contained organs.
4. Chest and thoracic organs.
5. Abdomen and digestive apparatus.
6. Genito-urinary apparatus.
7. Upper and lower extremities.
8. Skin and appendages.

A different arrangement is followed in the latest French authority on this subject.* Vices of conformation, maladies or infirmities which unfit for the military service, are enumerated in *Tableau No. 4 des Comptes rendus du Recrutement*,—the nomenclature of which is founded

* Didiot, op. cit. p. 462 et seq.

upon the ministerial instructions of the 14th of June, 1862. The disqualifications for military service are included in three great divisions,—1st, General maladies; 2d, Maladies of the tissues; and 3d, Maladies of regions,—all of which are subdivided into classes. The first division corresponds to the general disqualifications already discussed in this work; but mental infirmities are included in class second of the affections of regions; whilst the affections of tissues, contained in a separate class, are here treated of in connection with the locality in which they occur.

Without expressing an opinion as to the comparative merits of the two systems of classification, it will suffice to say that the system followed in this work has the sanction of long usage in our service, and is, therefore, more convenient to the purpose in view.

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FIRST CLASS.

ORGANS OF SPECIAL SENSE AND ACCESSORY APPARATUS.

A. AFFECTIONS OF THE AUDITORY APPARATUS.

16. Complete deafness, * * purulent otorrhœa.

Deafness, if real, constitutes a ground of exemption from the draft, and is a cause for rejection or discharge. A distinction must be made between deafness the result of disease of auditory nervous apparatus and the labyrinth, which is permanent and incurable, and a temporary and partial deafness from accumulation of cerumen, acute inflammation of the tonsils, and the affection of the throat not uncommon in habitual smokers (follicular pharyngitis). The latter is not a sufficient cause for exemption unless associated with well-marked strumous diathesis. A modified degree of deafness, sequela of the exanthemata due to thickening of the membrana tympani or closure of the Eustachian tube, but unaccompanied by any cachexia or of the evidence of ill health, should not be considered a reason for exemption under

the enrolment act, but is a cause for rejection under the recruiting regulations.

Malignant disease, caries of tympanum, mastoid cells, or labyrinth, inveterate chronic purulent otorrhœa, strumous or syphilitic, are absolute causes for exemption, rejection, and discharge. Otorrhœa dependent upon simple acute inflammation should not be considered a ground for exemption or discharge.*

Perforated membrana tympani, if considerable in extent and greatly impairing hearing, is a positive disqualification; but a slight perforation is not incompatible with a sufficient use of the organ.

Imperforate auditory canal, obliterate auditory canal, produced by a tumor, polypus, or syphilitic vegetations, positively disqualify; but a temporary closure due to acute abscess, not connected with caries or necrosis, and closure from the tumefaction of acute inflammation of the meatus, are not causes for exemption, rejection, or discharge.

Malformations, loss or defect of the external ear, sufficient in degree to seriously impair the hearing, are disqualifications for the military service. The most frequent malformation is an imperfect development of the meatus and

* Aide-Mémoire, op. cit. p. 51.

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auricle, the former being reduced to a narrow slit in the temporal bone, and the latter existing only as a slight fold of the integument. The labyrinth in these cases is most frequently normal, and a certain amount of hearing is present: often it is so considerable as to enable the man to perform useful duties.* In the case of the latter the malformation would not constitute a cause for exemption or discharge, but would be sufficient for rejection in recruiting for the regular army or an organized volunteer regiment.

Loss of external ear by violence, or sentence of a court, in so far as it is evidence of bad character, would be a ground for rejection under the recruiting regulations, but would not constitute a case for exemption or discharge.

B. AFFECTIONS OF THE EYE AND ITS APPENDAGES.

13. Total loss of sight; loss of sight of right eye; cataract; loss of crystalline lens of right eye.

14. Other serious diseases of the eye affecting its integrity and use: e.g. chronic ophthalmia, fistula lachrymalis, ptosis (if real), ectropion, entropion, &c. Myopia, unless very decided or depending upon some structural change in the eye, is not a cause for exemption.

* Article on Diseases of the Ear, by Hinton, in Holmes's System of Surgery. See also Toynbee, Diseases of the Ear.

"*Ophthalmia*, unless *chronic*, does not constitute a cause for exemption from the military service."*

Purulent and *gonorrhoeal ophthalmia*, actively contagious and destructive in their effects, are absolute disqualifications.

Chronic ophthalmia, complicated with either inversion or eversion of the lids, ulcers or perforations of the cornea, staphyloma or purulent discharge, is a cause for exemption or rejection, but not always for discharge.

Pterygion, *pinguecula*, are benign growths not sufficient to disqualify for military service, unless in the exceedingly rare event of extension across the area of the pupil.

Encanthis, when malignant, is a disqualification. *Conical cornea* is an absolute disqualification. *Opacities* of the *cornea*, *nebula*, *albugo*, and *leucoma*, if upon the right eye, preventing useful vision; demand exemption from draft, or are causes for rejection or discharge; but not, if upon the left.

Congenital defects of the iris of right eye sufficient to render vision uncertain; *rheumatic* or *sypilitic iritis*, *adhesions of iris to the capsule of the lens*; *staphyloma scleroticæ*; *cataract*; *loss of lens of right eye*; *glaucoma*; *loss*

* Aide-Mémoire, op. cit. p. 50.

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of an eye or the use of an eye, provided it be the right; *blindness or total loss of sight*, either congenital or accidental, are all causes for exemption, for rejection in the examination of recruits, and for discharge.

Myopia, unaccompanied by *keratitis*, or disease of retina and choroid, is not a ground of exemption under the enrolment act, unless decided, but is a cause for rejection under the recruiting regulations.

Presbyopia, as it is usually seen, is not a cause for exemption or rejection.

Hemoralopia and nyctalopia are not of themselves sufficiently disabling to constitute a cause of exemption. They are usually associated with some disorder of the general health, as indigestion, dyspepsia, or some evil habit, as masturbation, excessive tobacco-chewing, &c.

Fistula lachrymalis, epiphora, closure of the duct, and distension of the sac, are causes of exemption, rejection, or discharge.

Ptoxis is so frequently feigned, and such a rare disease, that it is not a ground of exemption or discharge. When genuine, it is usually associated with some disease of the brain, or third pair, so obvious as to be readily discernible, and which requires rejection; but

a recruit for regular army or volunteer service presenting himself with ptosis of right eye should be rejected.

Spasmodic motion of the lids (nictitation), when genuine, and dependent upon some deep-seated mischief in the eye, will be cause for rejection or exemption.

Adhesions of one or both lids to the globe of the eye, trichiasis of long standing, large encysted tumors, which interfere with vision and require an operation for relief, are all grounds of exemption and rejection.

Chronic abscess of the orbit is commonly the result of caries and necrosis, and is a disqualifying infirmity.

Strabismus, if very decided, and interfering with the use of the right eye, is a cause for exemption or rejection.

The most usual form of ophthalmic disability for military service, noted by authorities on this subject, is *amaurosis*. This vague term has wellnigh gone into disuse since the use of the ophthalmoscope has cleared up much that was obscure and indefinite, and assigned ill-understood symptoms to their appropriate lesions. It is no longer true, as it was in the days of Walther, that "amaurosis is a disease in which the patient sees nothing

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and the physician nothing." Under the general term amaurosis have been included various affections of the eye,—diseases of the optic nerve, retina, choroid coat, lens, and iris. In the present state of ophthalmic medicine and surgery, no exemption or rejection should occur under such a vague, ill-defined term as amaurosis.

All persons claiming exemption or discharge under any of the forms of disease in this class which may be feigned or produced, and all substitutes who may conceal their infirmities, should be carefully and patiently examined. To the chapter on feigned diseases the reader is referred for information on the sources of deception and error and the means of detecting imposture.

C. AFFECTIONS OF THE OLFACTORY APPARATUS.

15. Loss of nose, deformity of nose so great as seriously to obstruct respiration; oscena dependent upon caries in progress.

Cancer of the integument, noli me tangere, erosive ulcer of the follicles; deformities of the nose, greatly disfiguring the face, altering the voice, and impeding respiration; loss of the whole or part of the nose; affections of the septum, permanent or chronic, sufficient to close

the nasal fossæ; polypus of the nose, if large enough to produce great deformity and embarrassment of respiration; ozena; purulent and foetid discharge from the nose, due to old, intractable ulcerations of a specific character, are all absolute causes for rejection, for exemption, or discharge.

Occlusion of the nostril is usually due to adhesion of the cartilages of the alæ of the nose to the septum, the consequence of ulceration; it is also sometimes produced by adhesion of the upper lip to the nose; and this may be either accidental (burns, scalds, &c.) or congenital. When the occlusion is considerable, there is great deformity and interference with the free ingress and egress of air. The results of this condition are, embarrassment of respiration and speech, a painful sense of whizzing in the nose, impairment or abolition of sense of smell, alteration of voice, and, in certain states of the weather, an uncomfortable dryness of the mucous membrane of the mouth.

Loss of the nose is usually due to syphilitic or scrofulous ulceration, and, as evidence of a serious constitutional discrasia, is a ground for rejection independently of the merely local effect of the lesion. There are various affec-

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tions of the septum which close the nasal fossæ temporarily but are not causes for exemption or discharge. A small polypus, although a ground of rejection under the recruiting regulations, is not a sufficient disability for discharge or for exemption. It should be remembered, however, that a soldier may take advantage of a small polypus to obtain admission into the hospital.

Ozoena is an absolute disqualification for military service. Besides its connection with a constitutional vice and caries of the bones, the discharge is so offensive as to render a man unbearable to his comrades. True ozoena must not be confounded with a discharge from the nares, not uncommon in habitual and excessive smokers.

D. AFFECTIONS OF THE MOUTH AND GUSTATORY APPARATUS.

17. Caries of the superior or inferior maxilla of the nasal or palate bones, if in progress; cleft palate (bony); extensive loss of substance of the cheeks, or salivary fistula.

18. Dumbness. * * *

19. Total loss of tongue; mutilation or partial loss of tongue, provided the mutilation be extensive enough to interfere with the necessary use of the organ.

20. Stammering, if excessive and confirmed, to be established by satisfactory evidence under oath.

22. Loss of a sufficient number of teeth to prevent proper mastication of food and tearing the cartridge.

23. Incurable deformities or loss of part of either jaw, hindering biting of the cartridge, or proper mastication, or greatly injuring speech; ankylosis of lower jaw.

Hare-lip,—simple, compound, or complicated; loss of the whole or considerable part of either lip; loss of the whole or part of superior or inferior maxilla; incurable deformities of either jaw-bone, interfering with mastication, speech, or the tearing of the cartridge; ankylosis of the jaws; loss of the incisor and canine teeth of superior and inferior maxilla. These are the injuries and deformities of the mouth which, according to the *Aide-Mémoire*, constitute grounds of exemption from military service, for rejection, or for discharge. To which may be added *cancerous or erectile tumors, malignant ulcer, or deformities produced by the cicatrices of burns, and ununited fracture of inferior maxilla.*

A carious condition of the teeth, and loss of the incisors and canines, are causes of rejection, not only because the tearing of the cartridge is thereby prevented and the proper mastication of the food is interfered with, but because they are evidences of a depraved state of the general system. The cartridge is usually torn with the incisors and canines; but this is a point of less importance than the

evidence of impaired general health, for a man anxious to load his piece will find means to do it, if he have no teeth, though he may not accomplish it with rhythmical order and precision; but nature resents so important an interference with digestion as the failure to properly triturate the food. If a man have lost the incisors only, it will not constitute a ground of exemption or rejection; but if the loss was occasioned by caries and the remaining teeth begin to decay, he will probably prove useless if enrolled or enlisted.

The following affections of the tongue and mouth are positive disqualifications:—

Mutism; hypertrophy or atrophy of the tongue; stammering or stuttering, if inveterate and confirmed; mutilation or loss of sufficient part of the tongue to interfere with the proper use of the organ; malignant disease; chronic and inveterate ulceration; adhesion of the tongue to the cheek, and other adhesions, due to ptyalism; syphilitic or other ulcerations which impede the motions of the jaws; congenital fissure of the bones of the palate, or fissures produced by disease; salivary fistula; chronic enlargement of the tonsils sufficient to interfere with deglutition or phonation, and bucco-nasal fistula.

Loss, or impairment of the distinctness, of the voice may be due to affections of the tonsils, uvula, or palate; but *aphonia*, without evident affection of the health or disease of the larynx, is to be looked upon with suspicion.

Allied to these by contiguity of tissue, yet scarcely coming within the subjects included in affections of the gustatory apparatus, are—

Great deformities of the face, and loss of substance of the cheeks. These are causes for rejection under the recruiting regulations, but will not constitute grounds of exemption under the enrolment act, unless producing some impairment of function.

SECOND CLASS.

HEAD AND SPINAL COLUMN.

12. Great injuries or diseases of the skull, occasioning impairment of the intellectual faculties, epilepsy, or other manifest nervous or spasmodic symptoms.

35. Excessive anterior or posterior curvature of the spine; caries of the spine.

Affections of the scalp will be treated of in Class 8, with the affections of the skin and appendages.

Imperfect ossification of the bones of the cranium, recognizable by the persistence of the frontoparietal fontanelles, and sometimes separation and mobility of the sutures;

Monstrosity in the volume of the head, and considerable deformities resulting from fractures;

Serious lesions of the skull, derived from complicated wounds, considerable fractures, and the operation of trephining; caries and exfoliations involving the whole thickness of the bone; and

Fungous tumors of the dura mater (Aide-Mémoire).

Whilst a small blow on the head may be followed by serious results—exfoliation and necrosis—considerable loss of bone is not incom-

patible with complete restoration to health. Injuries of the cranium are so liable to produce derangement of the faculties, apoplexy, and other nervous disorders, that they are usually causes for rejection and exemption.

As remarked by Marshall,* injuries of this kind are frequently succeeded by alleged disabilities of mind or body; and it is often difficult to decide whether these consequences are real or feigned. All cicatrices of the scalp should be carefully examined; but a wound of the scalp, denuding the skull and causing exfoliation of the outer table, is not a ground for exemption if the injury occurred at a date long anterior and was not followed by brain-complication. Complete recovery, after even a considerable or entire removal of the scalp, is a circumstance not unfrequently observed by medical officers of the army on the frontier.

Syphilitic caries or necrosis of cranium is an absolute disqualification for military service.

Injury of any of the cranial nerves, affecting their functions, is also usually a cause for rejection or exemption.

Caries of the spine; spina bifida; curvature of the cervical, dorsal, or lumbar region; lumbar

* Marshall, op. cit. p. 21.

abscess. All of these, which are absolute disqualifications for military duty, are dependent upon some constitutional vice or cachexy, scrofula or syphilis. *Rickets*, which also demands exemption or rejection, is not an affection of the spinal column alone, but frequently involves the bones of the extremities. In much the greater number of cases it is a disease of early life; sometimes it is observed in adult life: in the former case, complicated with hydrocephalus; in the latter, very rarely.

Angular deformity, which includes *gibbosity* (*gibbosité*) of the anterior and posterior part of the thorax, is, usually, a disqualification. Gibbosity unconnected with spinal disease is not a disqualification for exemption unless the deformity is sufficient to prevent the carrying of the knapsack or to interfere with the proper play of the thoracic organs; but it is a cause for rejection under the recruiting regulations. Shoulders of unequal height, and greater prominence and development of the right,—sometimes congenital, and frequently due to occupation,—have no connection with spinal disease. The question of exemption or rejection turns upon the degree in which such a deformity is present, and whether sufficient to incapacitate a man for service. *Fractures and dislocations*

of the spine, it is scarcely necessary to remark, positively disqualify for military duty.

Certain diseases of the cerebro-spinal nervous system belong to this class, *epilepsy*, *chorea*, *paralysis agitans*, *hemiplegia*, *paraplegia*, *paralysis of any part of the body*, all of which are adequate causes for exemption, rejection, or discharge from the service. I refer the reader to the chapter on Feigned Diseases for information as to the means of detecting the simulated diseases of this class.

Neuralgia, if genuine, is an undoubted disqualification for military duty, but is so frequently and easily simulated that it should be looked upon with suspicion by the examining surgeon, and thorough search made for all possible sources of the disease. Dr. Brown-Séquard* includes in the various causes which give origin to neuralgia, carious teeth, tumors pressing on a nerve, neuroma, incised and punctured wounds, injury of nerve, reflex action, &c.

* Article on Diseases of the Nerves, in Holmes's System of Surgery, p. 876, vol. iii.

THIRD CLASS.

NECK AND CONTAINED ORGANS.

18. * * * Permanent loss of voice. * * *

24. Tumors of neck, impeding respiration and deglutition; fistula of larynx or trachea; torticollis, if of long standing and well marked.

. *Chronic laryngitis, induration and schirrus of epiglottis; polypus of the larynx, aphonia due to either of these causes*, are all positive disqualifications for military duty.

Aphonia may be produced also by pressure upon or division of the recurrent laryngeal nerves, and is sometimes a sequel of diphtheritis or acute laryngitis, but, as a condition easily simulated, should not be accepted as real without careful investigation.

Dysphagia, if due to stricture of œsophagus or pressure from tumors or schirrus, is an undoubted cause for rejection.

Goitre, if large enough to interfere with respiration, to prevent the buttoning of the shirt or the collar of the coat, or osseous degeneration of the thyroid gland, disqualify. A small permanent goitre not subject to periodical enlargement is not a cause of rejection

or exemption, unless it may be made use of to avoid duty and to obtain admission into the hospital.

Engorgement, scrofulous enlargement and ulceration or abscess of the lymphatic glands, due to constitutional cachexy, are absolute disqualifications for military service.

Cicatrices from old abscesses, burns or scalds producing deformity, retraction of jaw and rigidity, are causes of rejection, exemption, or discharge.

Fistulous openings into larynx or trachea, resulting from surgical operations or attempts at suicide, are grounds of exemption.

Wry neck, permanent in character, due either to chronic rheumatism, disease of cervical spine, or contraction of cicatrices, is a positive disqualification; but this state of the muscles must not be confounded with a temporary torticollis, produced by exposure to cold or lying asleep in a constrained attitude.

FOURTH CLASS.

CHEST AND THORACIC ORGANS.

25. Deformities of the chest sufficient to impede respiration or to prevent the carrying of arms and military equipments; caries of the ribs.

26. Deficient amplitude and power of expansion of chest. A man should not measure less than thirty inches in circumference immediately above the nipples, and should have an expansive mobility of not less than two inches.

Malformation of chest, or badly united fracture of ribs or sternum, sufficient to interfere with respiration, caries or necrosis of ribs, deficiency in extent of expansive mobility, greatly diminished vital capacity, evident predisposition to phthisis, phthisis pulmonalis, chronic pneumonia, chronic pleurisy and emphysema, chronic bronchitis and asthma, are all disqualifying infirmities.

A man of the minimum height of the present army regulations—five feet three inches—should measure in circumference of the thorax not less than thirty inches, should have an expansive mobility of not less than two inches, and, as there is a correspondence between the height and weight of a healthy

man, should not weigh less than one hundred and ten pounds. All men under this standard come within the definition of imperfect physical development or predisposition to phthisis. Very tall, as well as very small, men are frequently deficient in respect to capacity of thorax. It is not only necessary that the chest should be ample, but that there should be no disproportion of its parts: an abnormal depression or bulging usually indicates serious organic mischief. This rule is not invariable, however; for some occupations tend to increase the development of one side out of proportion to, and sometimes at the expense of, the other.

It is of the utmost importance to recognize, in the examination of recruits or drafted men, any defect in the capacity, or any disease of the thorax. A man with ill-developed chest and diminished power of expansive mobility will very certainly, if admitted into the army, soon become an inmate of the hospitals. Occupation, which has much to do with the development of tubercle, should not fail to be considered in connection with the question of admission or rejection.

Moist or dry rales, without dulness on percussion or increased vocal resonance, indicate bronchitis, with or without fluid in the bronchi.

Dry rales, accompanying prolonged expiration, with unusual resonance on percussion, indicate emphysema. Harshness of the inspiratory murmur, prolonged expiration, and increased vocal resonance confined to the apex of the lung, indicate advanced phthisis or pneumonia. The latter lesion, commencing at or confined to the apex, is rare; and hence these signs are diagnostic of phthisis.

Circumscribed bronchophony or pectoriloquy, with cavernous dry or moist rales, indicates a cavity. This may be dependent upon tubercular ulceration, a gangrenous abscess, or a bronchial dilatation. The first is generally at the apex, and the two last about the centre, of the lung.

Total absence of respiration indicates a collection of fluid or air in the pleural cavity. In the former case there is diffused dulness, and in the latter diffused resonance, on percussion.

Marked permanent dulness, with increased vocal resonance, and diminution or absence of respiration, may depend on chronic pleurisy, or thoracic aneurism, or on a cancerous tumor of the lung. The diagnosis between these lesions must be determined by a careful consideration of the concomitant signs and symptoms.*

* Bennett's Clinical Medicine, p. 592.

Organic disease of the heart and large arteries, hypertrophy, valvular insufficiency and aneurism, serious and protracted functional derangement, and dropsy, dependent upon disease of the heart, are absolute causes for rejection or exemption. Disease of the heart being frequently pretended, it is of great moment to be able to diagnose the various diseased conditions with some certainty. Excited and even tumultuous action of the heart is not to be accepted as conclusive on the subject; for almost all recruits, especially young men, will present this perturbed action of the heart when stripped for examination, although there may be no other evidence whatever, of disease. It must be remembered, also, that disease of the heart, not traceable to acute rheumatism, to violent gymnastic sports, or long-continued powerful muscular exertion, as in the case of acrobats, stevedores, porters, and others, or to some constitutional vice, as fatty degeneration, or constitutional syphilis, is extremely rare.

A friction murmur synchronous with the heart's movements indicates pericardial or exo-pericardial exudation.

A bellows murmur with the first sound, heard loudest over the apex, indicates mitral insufficiency.

A bellows murmur with the second sound, heard loudest at the base, indicates aortic insufficiency.

A murmur with the second sound, loudest at the apex, is very rare; but when present it indicates—1st, aortic disease, the murmur being propagated downwards to the apex; or, 2d, roughened auricular surface of the mitral valves; or, 3d, mitral obstruction, where the murmur is double, or occupies the period of both cardiac sounds.

A murmur with the first sound, loudest at the base, and propagated in the direction of the large arteries, is more common. It may depend—1st, on an altered condition of the blood, as in anæmia; or, 2d, on dilatation or disease of the aorta itself; or, 3d, on stricture of the aortic orifice or disease of the aortic valves,—in which case there is almost always insufficiency also, and then the murmur is double, or occupies the period of both sounds.

Hypertrophy of the heart may exist independently of valvular disease; but this is very rare. In the vast majority of cases it is the left ventricle which is affected, and in connection with mitral or aortic disease.*

Functional derangements of the heart are

* Bennett's Clinical Medicine, op. cit. p. 512.

usually dependent upon some gastric or intestinal disease, upon the use of some stimulants, as tobacco, alcoholic beverages, or upon the practice of masturbation.

The question of exemption, rejection, or discharge will rather turn upon the extent to which the disease—of which the functional disorder of the heart is merely a symptom—impairs the man's efficiency or fitness for the military service.

70 SPECIAL PHYSICAL DISQUALIFICATIONS.

FIFTH CLASS.

ABDOMEN AND DIGESTIVE APPARATUS.

27. Abdomen grossly protuberant; excessive obesity; hernia, either inguinal or femoral.

28. Artificial anus; stricture of the rectum; prolapsus ani. Fistula in ano is not a positive disqualification, but may be so if extensive or complicated with visceral disease.

29. Old and ulcerated internal hemorrhoids, if in degree sufficient to impair the man's efficiency. External hemorrhoids are no cause for exemption.

Chronic gastritis, chronic gastro-enteritis, chronic disease of liver or spleen, engorgement or tubercular infiltration of mesentery (marasmus), chronic diarrhoea, chronic dysentery, tænia, chronic peritonitis, with or without effusion, ascites, and obesity, are all causes for rejection or exemption, but not always for discharge. The extent, duration, and intractability of the diseases are questions influencing the decision in respect to discharge. Chronic diarrhoea and dysentery of long standing are so difficult of cure, and the mucous membrane so readily takes on diseased action after an apparent cure when the man is exposed again to the producing causes, that there can be no question as to the disabling nature of these two affections.

Dyspepsia may be considered a disqualifying

disease when of long standing, accompanied by general emaciation, vomiting, or regurgitation after meals, obstinate constipation, and hypochondria.

Hemorrhoids are disqualifying if large, internal, bleeding, ulcerated, and painful; but external hemorrhoids are neither a cause for rejection, exemption, nor discharge.

Malformation or stricture of the rectum, prolapsus ani, fistula in ano, and considerable fissures of the anus, are absolute disqualifications for military duty.

Hernia in all situations is a ground for rejection or exemption, but not invariably for discharge if an incipient inguinal hernia, or an ordinary reducible hernia without complication which may be retained in position by a well-fitting truss.

A tendency to hernia or relaxed abdominal rings may be a cause for rejection under the recruiting regulations, but is not a sufficient cause for exemption under the act for enrolling the national forces; and certainly it is not a cause for discharge.

Extensive cicatrices from incised wounds, with weakness of abdominal wall and tendency to hernial protrusion, constitute a disqualification for military service.

72 SPECIAL PHYSICAL DISQUALIFICATIONS

SIXTH CLASS.

GENITO-URINARY APPARATUS.

30. Total loss or nearly total loss of penis; epispadia or hypospadia at the middle or nearer the root of the penis.

31. Incurable permanent organic stricture of the urethra, in which the urine is passed drop by drop, or which is complicated by disease of the bladder; urinary fistula. Recent or spasmodic stricture of the urethra does not exempt.

32. Loss or complete atrophy of both testicles from any cause; permanent retention of one or both testicles within the inguinal canal; but voluntary retraction does not exempt.

33. Confirmed or malignant sarcocele; hydrocele, if complicated with organic disease of the testicle. Varicocele and cirrcocele are not in themselves disqualifying.

Loss of the penis, absence of both testicles from any cause, permanent retraction of one or both testicles within the external ring, are causes for exemption, rejection, and discharge. The power of voluntary retraction should not be mistaken for retention of the testicle in the ring.

The term "absence of the testicle," in this connection, is meant to apply to the loss of them by accident or disease, and must not be confounded with non-appearance in the scrotum. The evidences of virility will establish the fact that their absence from the scrotum is due to

not having descended. The retraction of the testicle is a cause for rejection because of the serious accidents to which the organ is exposed in its new position.

Malignant disease, scrofulous or syphilitic sarcocele, hydrocele if large, and *atrophy of testicles*, are absolute disqualifications for military service.

Varicocele and cirsocele, unless large enough to impede walking and to occasion a painful sense of weight and dragging, are not grounds of exemption, rejection, or discharge. Ordinarily, as the disease is almost universally confined to the left side, and produces no more serious result than atrophy of the corresponding testicle, it should not be considered a disqualification for military duty under the enrolment act. At the same time, it should be remembered that serious hypochondria has been induced by the loss of virile power due to varicocele.

Epispadias and hypospadias, when not farther from the root of the penis than its middle, *urinary fistula*, and *permanent stricture* are absolute disqualifications for military service.

Incontinence of urine, and hæmaturia, as distinct affections, unconnected with any disease, are so frequently feigned and so uncommon

that they may be thrown out of consideration as disqualifications.

Discharge of urine by the umbilicus, eversion of the bladder and loss of substance of the hypogastric region, and hermaphroditism, are causes for rejection and exemption.

Spermatorrhœa, whether due to masturbation, to an ill-cured gonorrhœa, or diseases of seminal vesicles, if so long continued as to have impaired the general health, is a disqualification.

Chronic enlargement of the prostate, if sufficient to interrupt the passage of the urine and fæces, is a cause for rejection or exemption.

Stone in the bladder, chronic cystitis of long standing, closure of ureter by a calculus, abscess of the kidney, fatty degeneration of the kidney (albuminuria), renal dropsy, and diabetes are all absolute disqualifications for military service.

SEVENTH CLASS.

UPPER AND LOWER EXTREMITIES.

36. Loss of an arm, forearm, hand, thigh, leg, or foot.
37. Wounds, fractures, tumors, atrophy of a limb, or chronic diseases of the joints or bones, that would impede marching or prevent continuous muscular exertion.
38. Anchylosis or irreducible dislocation of the shoulder, elbow, wrist, hip, knee, or ankle joint.
39. Muscular or cutaneous contractions from wounds or burns, in degree sufficient to prevent useful motion of a limb.
40. Total loss of a thumb; loss of ungual phalanx of right thumb.
41. Total loss of any two fingers of same hand.
42. Total loss of index finger of right hand.
43. Loss of the first and second phalanges of the fingers of right hand.
44. Permanent extension or permanent contraction of any finger except the little finger; all the fingers adherent or united.
45. Total loss of either great toe; loss of any three toes on the same foot; all the toes joined together.
46. The great toe crossing the other toes, with great prominence of the articulation of the metatarsal bone and first phalanx of the great toe.
47. Over-riding or superposition of all the toes.
48. Permanent retraction of the last phalanx of one of the toes, so that the free border of the nail bears upon the ground; or flexion at a right angle of the first phalanx of a toe upon a second, with anchylosis of this articulation.
49. Club feet, splay feet, where the arch is so far effaced that the tuberosity of the scaphoid bone touches the ground and the line of station runs along the whole internal border of the foot, with great prominence of the inner ankle; but ordinary, large, ill-shaped or flat feet do not exempt.
50. Varicose veins of inferior extremities, if large and numerous, having clusters of knots, and accompanied with chronic swellings or ulcerations.

76 SPECIAL PHYSICAL DISQUALIFICATIONS.

51. Chronic ulcers; extensive, deep, and adherent cicatrices of lower extremities.

Disqualifications affecting the extremities are either common to both upper and lower or proper to one or to the other.

A. DISQUALIFICATIONS COMMON TO BOTH UPPER AND LOWER EXTREMITIES.

Chronic rheumatism, with swelling of the joints, enlargement of the surrounding tissues, earthy deposits, contraction of the tendons, and wasting and loss of motion.

Chronic disease of the joints, due to injury or constitutional disease, as scrofula, rheumatism, gout, syphilis, &c.

Old or irreducible dislocations, or false joints.

Severe sprains, with or without displacement of the bones, followed by permanent deposit about the joint and impairment of mobility.

Relaxation of the capsular or other ligaments of a joint, with abnormal mobility and voluntary or involuntary luxation of the bones.

Complete or partial ankylosis of an important articulation.

Sinuses communicating with the osseous cavities, the articulations, and with the thickness of spongy bones.

Hydropsy of the articulations.

Badly united fractures, sufficient to impede the proper motions of the limb, or otherwise to interfere with the performance of military duty.

Defective or excessive curvature of the long bones, rickets, caries, necrosis, exostosis.

Atrophy of a limb ; paralysis of a limb.

Extensive deep and adherent cicatrices ; aneurisms.

Contraction or permanent retraction of a limb or of a portion of a limb.

Loss of a limb or of an essential part of a limb, all of which require exemption, rejection, or discharge.

B. DISQUALIFICATIONS PROPER TO UPPER EXTREMITIES.

Extraordinary size of the hands, proceeding from a natural lymphatic engorgement or a general varicose state of the venous capillaries, or from habitually ulcerated chilblains.

Fingers adherent or united, supernumerary, double, or branched ; permanent flexion or extension of one or more fingers, except the little finger, and irremediable loss of motion of these parts.

78 SPECIAL PHYSICAL DISQUALIFICATIONS.

Loss of the first phalanx of the thumb of the right hand.

Total loss of either thumb.

Total or partial loss of the index finger of the right hand.

Loss of the first and second phalanges of the fingers of the right hand.

Total loss of any two fingers of same hand.

Mutilation of the last phalanges of the fingers of either hand.

Partial loss of index finger of right hand, although a ground of exemption or rejection, if it consist of loss of more than the last phalanx, is not a sufficient disability to justify discharge; for a trained soldier will not thereby be much embarrassed in handling his piece.

C. DISQUALIFICATIONS PROPER TO INFERIOR EXTREMITIES.

Varicose veins, voluminous and multiplied, render a man unfit for military duty. If the varices are small, not numerous nor accompanied by marks of ulceration, cedema or thickening of the integument, they are not disqualifying. If the deep-seated veins are involved, the varices ancient and voluminous,

and the man have long, thin, ill-developed legs, the disqualification is undoubted.

Chronic ulcers.—In the French service, ulcers of the inferior extremities are not held to be causes of exemption, except in the following cases: those accompanied by great loss of substance, those with atrophy of the limb, those in which the general constitution is profoundly altered, those complicated with varicose veins.* There can be no doubt of the propriety of exemption, rejection, or discharge in either of these cases; but the exclusion is not sufficiently rigid for our service. All ulcers of the lower extremities of several months' duration, whether dependent upon some constitutional vice, upon plethora or defective assimilation, not promptly curable, and which would be increased by the use of the limb, should be considered a cause for exemption or rejection, but not always for discharge from the service. These rules do not apply, of course, to factitious ulcers.

Extensive adherent cicatrices, dark-colored and accompanied by evidences of former ulceration, by evident marks of cachexy, by varicose veins, or produced by considerable incised

* Aide-Mémoire, op. cit. p. 106.

wounds penetrating to and involving important muscles.

Lameness, unless produced by obvious deformity, unequal length of the limbs, shortening of femur by fracture, by disease of hip, knee or ankle joint, or affections of muscles, is not a ground of exemption or discharge. *Fracture* is not necessarily a cause for exemption; but it is frequently made use of by a reluctant soldier to evade duty, and in this respect is an important subject. That degree of shortening of the limb which will disable a man from the performance of military duty is not easily determined; but there can be no doubt that shortening of one inch and a half need not occasion an obvious halting or imperfection of gait. An accidental fracture well united, occurring in a man in good health in whom there is no unusual fragility of bones, is neither a ground of exemption, rejection, or discharge.

The cambering of one or both knees, carried to excess (knock knees, in-knees). This must be very decided, and accompanied by some other deficiencies of structure, to constitute a disability for exemption.

Club feet and splay feet are always positive disqualifications. The splay foot, to constitute

a disqualification, consists of inclination inwards of the internal malleolus,—arch being effaced, the tuberosity of the scaphoid bone touching the ground, and the internal border of the foot being in a line with the base of the heel and first metatarsal bone, the ligaments weakened, and the power deficient, because the axis of the leg does not fall upon the centre of the foot. This condition should not be confounded with broad, flat, ugly feet, peculiar to some races and nations of the continent, in whom this conformation is not a disabling infirmity.

The toes joined together, double or branching.

That deformity in which the great toe crosses the other toes, and in which there is great prominence of the articulation of the great toe and first metatarsal bone.

Over-riding and superposition of all the toes.

Loss of a great toe ; loss of three toes of the same foot.

Mutilation of the last phalanges of the toes of either foot.

The retraction or inflexion of all the toes of the same foot or of two toes.

The permanent retraction of the last phalanx of a toe in which the free border of the nail bears upon the ground, or flexion at a right angle of

the second phalanx of the second toe upon the first, with ankylosis of the articulation.

There can be no doubt of the disqualifying nature of all the above disabilities. Upon the soundness and efficiency of the lower extremities depend, in great degree, the capacity of the soldier; and the examining surgeon, hence, should look carefully to the development and symmetry of the thighs, legs, and feet,—not the symmetry of the painter and sculptor merely, but the symmetry which delights the eye of the military surgeon, consisting of large joints, prominent bones, swelling muscles, and rough, elastic integuments. As is well said by that philosophical observer Dr. Jackson,* the graceful shape and form of perfect symmetry are seldom connected with power, activity, and that inexplicable fund of endurance which supports toils and fatigues with constancy and firmness.

The fetid sweat of the feet is sometimes a cause for rejection, if excessively offensive; but the question of rejection turns more frequently upon the condition of the integument which gives rise to it. Chilblains, old and ulcerated, and chronic engorgement and hypertrophy of

* Formation, Discipline and Economy of Armies, op. cit. p. 22.

the sweat-glands, are usually the causes of the bad odor of some feet. This odor is less objectionable in the military view than the softness of the integument and the tendency to unpleasant and intractable ulcerations, particularly exhibited on the march.

EIGHTH CLASS.

SKIN AND APPENDAGES.

6. Inveterate and extensive disease of the skin, which will necessarily impair his efficiency as a soldier.

It may be expressed in general terms that all *chronic and incurable or contagious skin-diseases, except scabies*, are causes for rejection, exemption, and discharge. Diseases admitting such latitude of exemption, and oftentimes so difficult to assign to appropriate classes, require more than this summary statement of the extent to which they may be regarded as disqualifications.

Chronic eczema; herpes circinnatus which is communicable; herpes capitis when chronic; chronic pemphigus; scabies, when of long standing and herpetic in character*, all of which belong to the class *vesiculæ*, are positive disqualifications for military service. To this list may be added the *squamæ*,—*lepra, psoriasis, pityriasis, and ichthyosis*.

Lupus serpinosus and lupus devorans, and cheloid tumors, are causes of exemption and re-

* Neligan, Diseases of the Skin, p. 89.

jection; but the latter is not usually a cause for discharge.

Of the *dermatophytæ*, *porrigo* (favus; tinea; scald-head), *sycosis*, are absolute causes of rejection and exemption. All the Syphilides are positive disqualifications.

Alopecia, whether due to any of the diseases mentioned in this class or to hereditary tendency, if extensive, or if the loss of hair be total, preventing a man wearing a military cap and exposing him to accidents from atmospheric vicissitudes or exposure to the sun's rays, is a reason for exemption, rejection, or discharge; but the temporary alopecia produced by an attack of acute disease is not a disqualifying infirmity.

To these diseases of the skin may be added certain congenital deformities which authorize rejection, as *nævi*, *large*, *livid*, *hairy*, and *unsightly spots* when they occur on the face and render the man hideous and disgusting to his comrades; but these can scarcely be considered causes for exemption under the enrolment act.

SECTION II.

PRETENDED DISQUALIFICATIONS FOR MILITARY SERVICE.

CHAPTER I.

GENERAL CONSIDERATIONS.

THE term "feigned disease," as employed throughout this treatise, is used in its general signification. Technically, there are distinctions, as will be shown further on, between feigned diseases proper, and the other forms of imposture included in this general term.

As the voluntary system of raising a military force, previous to the passage of the act for enrolling and calling out the national forces, was alone employed, the attention of examining surgeons was directed to discover dissimulated or concealed diseases, rather than simulated or feigned. Early in the war, in

the general enthusiasm awakened in support of the government, large numbers of men entered the ranks with concealed infirmities, which early required their discharge. Captains, more solicitous about securing the requisite number to form a company than the physical capacity and stamina of the men composing it, wilfully overlooked, if they did not actually suggest, the dissimulation. Many men, influenced by the large bounties, and having no higher motive to influence them, concealed their disqualifying infirmities until after enlistment, when they made use of them to avoid duty or procure a discharge.

Hitherto the war has not drawn so heavily upon the population as to induce the study of methods of deception. Neither has it been necessary to elaborate an ingenious imposture to procure a discharge from the service; for the mere assertions and importunities of the man have too often succeeded in accomplishing his desires. In our country, indeed, the sources of information have been few. Here the professional beggar, whose artful portraiture of sickness and suffering awakens the sympathy upon which his support depends, is rarely seen: he is not one of the "sights," as Charles Lamb styles the poor of London. Our

civil hospitals furnish few instances of malingering, for outside the walls means of subsistence by labor or charity are rarely wanting. The few cases which have heretofore occurred were found in our penal institutions, where labor is imposed on the reluctant convict, in our courts, where justice is to be defeated, and in our army, where the avoidance of duty procures ease and does not lessen pay and allowances. The necessary information has, therefore, not been at hand to meet the wants of malingerers in our newly-created army. The varieties of feigned diseases have, consequently, been limited in number, if the men feigning are legion.

The causes of feigning in the military service of the United States are to be found usually in one or more of the following:—

1. An inaptitude or a positive disinclination for service, which has been overcome by payment of bounties or the fear of being disgraced in public estimation by remaining at home.

2. The nature of the service, its dangers, exposure, and hardships. Laborious marches, fatigue-duty, night-watching, the discomforts of the camp, and the necessary rigor of military discipline, disgust the lazy, the spiritless, and the insubordinate.

3. Those uninfluenced by the privations, hardships, and dangers of the service, are interrupted in their attention to duty by small pique, disappointment as to promotion, and want of confidence in the character, conduct, and professional knowledge of their immediate superiors. Losing thus their interest in the service, and actuated by no higher motives than these personal considerations, they begin the career of imposture by entering the regimental hospital for pretended ailments which rapidly acquire consistence and definiteness.

4. The vice of malingering is further encouraged by the conduct of the regimental medical officer. A desire to be popular amongst the men, many of whom are his friends and neighbors, renders the surgeon lenient in his judgment, and disposed rather to gloss over and hide impostures than to expose and bring the offender to punishment.

5. The transfer of sick and wounded soldiers to State hospitals, and the giving furloughs to sick, wounded, and convalescent more freely than to the well, contribute to the discontent of the men, and dispose them to feign disease or disability to obtain the same indulgences.

6. The very large number of discharges on surgeon's certificate of disability powerfully contribute to the prevalence of malingering. The percentage of men discharged for incurable disorders, from which they soon after surprisingly recover, is not small: indeed, in every village there are one or more instances of the expertness or perseverance of the malingerer or carelessness of the surgeon.

7. The leniency of the military authorities in the treatment of malingering affords additional encouragement to the practice. Besides the difficulty of demonstrating clearly enough to meet the objections of a military court the nature and character of this offense, the punishment will not, necessarily, be in proportion to the gravity of the crime. In the regular service there have been not a few instances of summary punishment upon proof of feigning, but not one instance, so far as I am acquainted, in the volunteer service. Having no fear of the law before his eyes, the simulator is not hindered in the performance of any of his tricks or stratagems. The worst that can happen him is to be exposed and returned to duty,—to have an opportunity at no distant day to resume his old imposture and to deceive other credulous medical officers.

8. Besides these causes, there can be no doubt that men sometimes feign disease without reason,—a species of monomania; and sometimes it arises in that state of mysterious mental sympathy known as “imitation.”

CHAPTER II.

CLASSES OF MEN FEIGNING, AND CHARACTER OF
THEIR AILMENTS.

OUR service should not be judged, in respect to the vice of malingering, by the standard of the French and English. Under the operation of the conscript law, France is repeatedly drained of her able-bodied men, and the desire becomes wide-spread to avoid a service which entails such calamities upon families. The English army, maintained exclusively by voluntary enlistment, is not popular amongst the middle and lower classes, and "hence recruits rarely enlist in consequence of a deliberate preference for military life, but commonly on account of some domestic broil, or from a boyish fancy, sometimes from a want of work and its immediate result, great indigence. Perhaps nine-tenths of the recruits regret the step they have taken, and are willing to practice any fraud or adopt any means which promises to restore them to liberty and the society of

their former acquaintance.”* The same facts are true of our regular army in time of peace. But the gigantic army called into existence by the necessities of the present war is composed of very different material; yet it need occasion no surprise that in the vast multitude of men who have taken up arms there are many who mistook zeal for the cause for aptitude for a military life. It is even less remarkable that there are not a few influenced by other considerations than patriotism in entering the ranks. Consequently it must be understood at the outset that the social status of the soldier previous to his enlistment has little to do with the determination of the question of feigning, in a given case. My own experience, however, has given me a decided opinion on this point: I have very frequently observed, indeed, that the malingerers in our hospitals are not derived from the class of well-informed educated soldiers, of whom there are quite a large number in the ranks, but from the class of workmen, laborers, and uneducated men. The appearance of the former amongst a flock of “hospital birds” is an anomaly which attracts immediate attention.

* Marshall's Hints to Young Medical Officers on Examination of Recruits, &c. (London, 1828), p. 89.

One of the most important subjects under this head is the question of the nationality of the malingerers in our army. The army is composed mainly of representatives of three nationalities, American, German, and Irish; besides these there are a few Scotchmen, Frenchmen, and Italians, but they may be excluded from consideration, as insignificant in numbers as compared with the great masses of the others. It has happened me to observe a larger number feigning and fewer wounded amongst the Germans than the Americans or Irish. I think it may be assumed in respect to the German that the *argumentum ad crumenam* is the argument which determines the choice of some in this controversy. I say this whilst remembering the devotion of the German race to national unity and liberty, and their attachment to their adopted country; but they love ease and money not less,—many of them more. Chronic rheumatism is the ailment which they most frequently feign or exaggerate; next, incontinence of urine and hæmaturia, and, lastly, diarrhoea.

The class of Americans who mainly simulate disease are the married men of mature age,—from thirty to forty,—mechanics or laborers by profession, who were induced to enter service,

as I have already remarked, by a sudden zeal which had no foundation in a conviction of duty, or by the stimulus of large bounty. My observation inclines me to believe that much of the feigning practiced by them has its origin in nostalgia; for, whatever may be our peripatetic habits as a people, there can be no doubt of the strong attachment to home felt by the inhabitants of the rural districts. Affections of the respiratory organs, of the urinary and genital organs, diarrhoea, dyspepsia, heart-disease, and epilepsy, are the disabilities usually feigned by Americans.

Contrary to the opinion of Mr. Marshall,* who is great authority on these subjects, the Irish have seemed to me to simulate less frequently than the Americans or Germans. I am quite prepared to assent to the dictum of Dr. Davies, quoted by Marshall, that "the poorer class of laborers" are those who usually feign disease. Sun-stroke, chronic rheumatism, and "pain in the back" are the favorite diseases of the Irish.

Certain temperaments, as might be anticipated, are more prone to malingering than others, e.g. the bilious and melancholic or hypochondriacal, the nervous, the lymphatic;

* Hints to Young Medical Officers, &c. p. 91.

whilst the sanguine is least of all disposed to it. The typical malingerer has dark brown or hazel eyes, dark hair, and dark complexion; his face is stealthy, dogged, lowering; his eyes suspicious, furtive, restless; and his manner habitually constrained and exhibiting violent attempts at composure. These last physiognomical characteristics become more evident when the malingerer is subjected to a rigid cross-examination.

The diseases feigned by the various classes of malingerers are those which have either happened under their observation and with which they are therefore most familiar, or with which they are pretty thoroughly acquainted by report. It will be found, usually, that the diseases most feigned are those most prevalent in the army, provided they can be simulated with tolerable facility. This, then, is a measure of the varieties of simulated or factitious diseases which come under the observation of the military surgeon. It is a curious subject to trace out the various phases which this class of disabilities has assumed since the commencement of the present war. Beginning with very crude and imperfect attempts, there has been a gradual progression in completeness of detail and a closer adher-

ence maintained to the natural types of disease. In a series of 10,991 discharges on surgeon's certificate for all causes, examined by me at the Adjutant-General's Office with reference to this subject, I find that the class of dissimulated infirmities—*i.e.* infirmities existing at the time of enlistment—preponderated at two periods:—at the period of the first enrolment of the three-years volunteers, and at the period of the second enrolment under the stimulus of large bounties. These rapidly declined after three months' service; but then came into existence the class of feigned or factitious diseases. Chronic rheumatism, heart-disease, incipient phthisis, deafness, defects of vision, &c., feigned; varicocoele, hemorrhoids, old wounds and injuries exaggerated, and chronic diarrhoea, ophthalmia, palpitations, spermatorrhoea, &c. produced, make their appearance more frequently subsequent to the discharges for feebleness of constitution, mental imbecility, cachexies, hernia, and various physical defects. In a series of discharges on surgeon's certificate for the first part of 1862, the discharges for heart-disease amounted to 30 per 1000, whilst for the last three months of 1862 they reached the large proportion of 68 per 1000, and for the first two months of 1863

the enormous proportion of 137 per 1000. The discharges for hernia and epilepsy diminished in nearly the same ratio. Chronic rheumatism was more frequently simulated early in the war than any other disease, until the publication of a general order from the War Department prohibiting the discharge of men for this cause.

CHAPTER III.

DUTIES OF MEDICAL OFFICERS IN RELATION TO MALINGERING—DIAGNOSIS AND CLASSIFICATION.

UPON the conduct of the regimental medical officer depends in no small degree the prevalence of malingering in a corps; and upon his knowledge or ignorance, the success or failure of the imposture. To the thorough knowledge of disease, and the means of distinguishing true signs and symptoms from false ones, required, there is superadded the necessity for great tact, delicacy, and judgment. "It is obvious," says Dr. Cheyne,* "that the more we know of disease by reading and observation, the more patience and temper we possess, the more successful shall we be in the detection of imposture. I am convinced that simulated disease will soonest be discovered by those who conduct the inquiry in the most scientific manner, carefully applying the case in doubt to the description of the disease in standard works of pathology."

* Letter to Dr. Renny on Feigned Diseases, Dublin Hospital Reports, vol. iv.

Violence of conduct and open declaration of suspicions will not induce the malingerer to yield: indeed, they will rather dispose him to be more obstinate in his adherence to his statements and more circumspect and consistent in his general behavior. If a man be suspected of feigning, the discreet surgeon will not at once inform him of it; but he will carefully investigate all the circumstances of the case. When his opinion is formed, he will not announce it in the presence of the man's comrades, but take an opportunity to tell him privately that his imposture is discovered. As the man's object is either to avoid duty or procure a discharge from the service, he should be early informed that the first may succeed for a short time, but that the last is utterly impracticable. To deprive the malingerer of hope is to contribute greatly to his cure. It is an unwise policy to promote his deception by treating him as if all his ailments were real; but his reputation amongst his comrades may be preserved by prescribing for him some placebos. As a rule, it is better for the military surgeon, in all cases of doubt, to suspect any soldier of feigning whose symptoms are obscure, unreasonable, or improbable; but, until the case be decided, he should treat the man in all respects

as if his symptoms were real expressions of a diseased state.

I have already adverted to the physiognomical characteristics of the simulator, and the evident constraint of his manner when under the close observation of the surgeon. He finds it difficult to preserve at all times and under all circumstances the consistency of his character. In every hospital-ward there may be found men, of good character, who take pleasure in watching his conduct and reporting his inconsistencies. In this respect our service differs from the English and French services, where the principle of free-masonry amongst the soldiers prevents their exposing a comrade. Here, besides the high-toned soldier abhorrent of this practice of malingering, who informs the surgeon of the conduct of an impostor as a matter of duty, may be found not unfrequently the discontented sick or wounded, who expose the malingerer because of envy of his success in evading duty which has fallen upon his more faithful comrades. To obtain the confidence of these men and secure their aid is an important part of the duty of the surgeon. The nurses cannot always be relied on to keep careful watch over and make faithful report of the conduct of the malingerers:

yet the surgeon must be compelled in a great majority of the cases to depend upon their discretion, intelligence, and willingness.

If the malingerer preserve his general character as invalid successfully, the surgeon may detect his imposture by carefully questioning him as to the circumstances under which his disability occurred, in which he will probably disclose the motives of his feigning, or by encouraging him to relate his symptoms, in which he will probably assign to his disease symptoms that do not belong to it, or give prominence to those of least importance. Strange as it may seem, there are few simulators who are prepared with a set of symptoms at all appropriate to the peculiar disease or disability feigned, or who are even ready to give a set of symptoms, or who can relate, without hesitation and anxiety, the manner in which the disease or disability originated or occurred. Nevertheless, they are peculiarly liable to overact their parts, to impress the medical officer with the extent and reality of their sufferings.* But the pains or symptoms are usually not in harmony with the alleged disease or disability, or are wholly at variance with it.

* *Cyclopædia of Practical Medicine*, vol. ii. p. 124.

In making a diagnosis of a suspected case the surgeon will be greatly aided by chemical tests, by the microscope, by the ophthalmoscope, and frequently by anesthetic agents. But above all he will find it necessary to use his own senses, his habits of observation, and that peculiar tact in detecting impostors which, whilst it seems an instinct with some, may be acquired by all who are willing to cultivate it.

Bégin* proposes the following rules for the diagnosis of feigned diseases: 1st. The appreciation of the moral situation of the subject and the motives which influence him to simulate, dissimulate, or provoke the malady of which he pretends himself to be the victim. 2d. Comparison of this malady with the age, the sex, the temperament, the mode of life, of the individual. 3d. Attentive examination of the affected parts, the local symptoms which they present, and the impediments to the exercise of functions which result from such lesions or which are attributed to them. 4th. Careful comparison of these lesions with the development, the color, and the other general dispositions of the organism. 5th. Study of the causes to which the lesion, real or

* Dictionnaire de Médecine et de Chirurgie, article *Réforme*.

pretended, is attributed. 6th. Methodical questioning of the subject relative to the circumstances which accompanied the development of the disease, to the sensations, to the pains, to the hindrance of function, thereby produced. 7th. Proper employment of therapeutic measures, suggested by the indications of the morbid state and the observation of the effects. 8th. Appropriate excitation, to distract the attention of the man whilst the affected parts are examined or made to move.

Various systems of classification have been proposed for facilitating the study and description of feigned diseases. Didiot* divides them into pretended, provoked, simulated, or dissimulated. The authors of the article in the *Cyclopædia of Practical Medicine*† arrange them in four groups:—

1. Feigned diseases, strictly so called, or those which are altogether fictitious.

2. Exaggerated diseases, or those which, existing in some degree or form, are pretended by the patient to exist in a greater degree or different form.

3. Factitious diseases, or those which are wholly produced by the patient or with his concurrence.

* Code, op. cit. p. 461.

† Vol. ii. p. 133.

4. Aggravated diseases, or which, originating in the first instance without the patient's concurrence, are intentionally increased by artificial means.

Fodère and Orfila adopt a similar classification.

Gavin* founds his classification on the means of diagnosis; on the symptoms which are referrible to the feelings of the patient, and those which are cognizable by the senses or acquired information of the physician. Each of these systems of classification has merit peculiar to itself: but none of them are applicable to the plan of this work. To secure uniformity, the arrangement followed in the description of real disqualification for military service will be adhered to in the description of the pretended.

Feigned diseases, affecting—

1st. Organs of special sense and accessory apparatus;

2d. Head and spinal column, and cerebro-spinal nervous system;

3d. Neck and contained organs;

4th. Chest and thoracic organs;

5th. Abdomen and digestive apparatus;

6th. Genito-urinary apparatus;

* On Feigned Diseases, p. 54.

7th. Upper and lower extremities;

8th. Skin and appendages.

In treating the feigned disabilities peculiar to these classes, I shall have in view more especially the feigned, factitious, exaggerated, and aggravated diseases which are usually seen in our service. For obvious reasons, I shall not describe the means used by malingerers to feign or produce them.

CLASS FIRST.

FEIGNED DISEASES AFFECTING ORGANS OF SPECIAL
SENSE AND ACCESSORY APPARATUS.*A. Auditory Apparatus.*

DEAFNESS, of the disabilities affecting the ear, is most usually feigned in our service.

The regulations of the Bureau of the Provost-Marshal General require that this disability, before it shall be admitted as a ground of exemption, "shall be proved by the existence of positive disease or other satisfactory evidence." It is a malady which is often simulated, because it can be done with facility, and the real deafness is not easily distinguished from the simulated.* In the French service, as in our own, it is not admitted as a cause of exemption unless established by satisfactory evidence. In 10,991 discharges on surgeon's certificate, for all causes, examined by me at the Adjutant-General's Office, 169 were for deafness. There can be no doubt that many of these were either feigned or exaggerated. A modified degree of deafness, insufficient to constitute a

* Aide-Mémoire, op. cit. p. 55.

reason for exemption or discharge, is a not uncommon sequela of the exanthemata even after the otorrhoea has entirely disappeared. This "hardness of hearing" is frequently exaggerated. A temporary loss of function of the auditory nerve is sometimes produced by typhoid fever, and is greatly exaggerated by soldiers to procure a discharge. Usually, however, complete deafness is the lesion feigned. The malingerer in doing this overacts his part; for complete abolition of the faculty of hearing rarely exists, except as a congenital condition. In feigned deafness the tone of voice habitual to the man is not altered, as it is in the real infirmity. There is a keen look of inquiry, an attentive, subdued manner, and low-toned voice, characteristic of the deaf man, not easily simulated. Real deafness is slow in its progress, whilst the feigned is sudden in its access. If this lesion has occurred suddenly, and there is no evident affection of the auditory canal, membrana tympani, or Eustachian tube, the surgeon will have good reasons for a suspicion of fraud.

By talking very loudly on some topic of interest to the malingerer and then suddenly and unexpectedly in a low tone, he will be very certain to betray his artifice; or he may be

surprised by sudden noises, by dropping money behind him on the floor, by being waked out of his sleep, or by being accused of some crime.* The natural but involuntary language of the countenance gives evidence that the impostor gains intelligence of what is passing around him through the organ of hearing. No case of deafness should be admitted as real until the surgeon has satisfied himself that there are lesions of the auditory canal, otorrhoea, perforate membrani tympani, or disease of the nerve, and that no artificial means have been made use of to close the canal against the entrance of sound.

B. Affections of the Eye.

The affections of the eye are feigned, exaggerated, and aggravated.

Ptosis is frequently feigned, usually of both eyes. A man has come under my observation who had escaped duty four months by a simple closure of the palpebræ. He was led to the hospital by a comrade. When I attempted to open the lids, the orbicularis *violently resisted* the effort I made, and there was no disease of

* Gavin on Feigned Diseases, op. cit.; Cyclopaedia of Practical Medicine, art. Feigned Diseases; Dictionnaire des Sciences Médicales, art. Simulation des Maladies.

any part of the globe. The imposture was obvious. He was privately informed that his case was thoroughly understood, and a galvanic shock through the temples effected a cure as sudden as it was complete.

Nictitation is an affection of the eyelids occasionally feigned in our service. Sometimes it is a habit acquired early in life, sometimes a sign of disease in the deeper structures of the eye, and sometimes a purely factitious condition. When it consists of a habit of winking merely, it is not a disqualifying infirmity, and when factitious is unaccompanied by lesions of internal parts of the eye. Before coming to a definite conclusion, the surgeon should use the ophthalmoscope.

Myopia is frequently exaggerated, and in some instances, apparently, produced. It is not difficult of detection when merely fictitious. The appearance of the eye, and the manner and habits of the man not those of a near-sighted person, are points of diagnosis to determine the question. If produced, the detection is more difficult. By a habit of holding small objects close to the eye, and by wearing glasses, a condition of the eye and a peculiarity of manner are induced not unlike myopia. Myopia exaggerated is not easily recognized. Short-

sighted persons do not look at the person with whom they are conversing, being attentive to the words only; and in reading they hold the book obliquely towards their eyes. Their eyes are frequently prominent, and the cornea preternaturally convex; the pupil is generally large, the eyeball firm, and the lids tender; the eyebrows are corrugated, and there are goose-foot wrinkles at the corners of the eyes. The internal structure of the eye, in a case of suspected myopia, should be examined with the ophthalmoscope; for in the worst cases there will be found some obvious lesions. The *experimentum crucis*, however, consists in the use of bi-concave glasses. A man is exempt under the French conscript law if he sees at a distance of 30 or 35 centimetres from his nose with bi-concave glasses Nos. 4 and 5, and if he distinguishes clearly distant objects with the No. 6 or 7.*

Blindness, or loss of sight, in various degrees, is frequently feigned. It requires great tact and perseverance on the part of the malingerer to simulate loss of sight; and by watching him narrowly at all times he will be very certainly

* Didiot, op. cit. p. 466; Aide-Mémoire, loc. cit.; Gavin, op. cit.; Copland, Med. Dict. p. 1036; Cyclopedia of Practical Medicine, etc.

caught seeing. The manner and gait of a blind man are peculiar, and not easily imitated.

Feigned amaurosis is easily detected by the employment of the ophthalmoscope, regard being had to the possible use of some agent to dilate the pupil and render it immovable. If the blindness be due to cataract, it may be diagnosed by the usual signs of that affection. The amaurosis induced by the use of certain drugs differs from the true disease in the appearance of the eye, which is red, watery, and inflamed.*

Patients in our general hospitals frequently simulate an obscure disease of the eye which they may happen to see placed upon the card of a comrade, and frequently also continue to pretend being affected with a disease the name of which an attending surgeon has incautiously placed upon their own cards. An instance occurred to me not long since, in going around the wards of a hospital of which I am in charge, of a man feigning "retinitis," who produced, on my questioning him, a transcript of a card appended to his bed many months before, in some other hospital. Hemeralopia, nyctalopia, and amblyopia, when temporary lesions, are due,

* Percy and Laurent, in *Dict. des Sci. Med.*, art. *Simulation des Maladies*.

usually, to some impairment of the functions of the digestive apparatus. They are sometimes feigned, but are easily detected by the use of the ophthalmoscope.

C. *Affections of the Nose.*

The only feigned disease of the nose which it is necessary to mention here belongs to the class of exaggerated lesions. A small polypus is not a ground for exemption from military service, neither is it a cause for discharge; but the importance of it may be greatly exaggerated by an unwilling soldier who wishes to avoid duty or procure a discharge.

D. *Affections of the Mouth.*

Stammering is one of the affections occasionally feigned. The stammerer invariably overacts his part. It is usually pretended to have occurred suddenly, and is so excessive as to justify suspicion. True stammerers rarely hesitate in repeating any thing they have committed to memory, or in singing.* In all cases of stammering, the organs of speech should be carefully examined by the surgeon. If they be well formed, the tongue not mutilated, of

* Fallot, *Memorial de l'Expert*, &c. loc. cit. p. 94.

proper size, and capable of being protruded, and there be no deformity of the jaw or malformation, the surgeon has just grounds for assuming that the defect of speech is feigned.

Dumbness has been feigned several times in my experience. As it usually occurs suddenly, without obvious cause and without evidences of congenital or acquired defects, it is not difficult of detection. Paralysis of the tongue is sufficiently evidenced by the withered appearance of that organ and the difficulty of deglutition. In an ordinary case of paralysis, where loss of speech takes place, it can be seen that the patient moves his tongue with difficulty, that deglutition is difficult and takes a long time, and that, from the paralysis affecting the muscles of the cheek and pharynx, the saliva issues from the mouth, and the patient, in short, slavers incessantly.*

* Gavin on Feigned Diseases, op. cit. p. 94.

CLASS SECOND.

FEIGNED DISEASES AFFECTING THE HEAD AND SPINAL COLUMN AND THE CEREBRO-SPINAL NERVOUS SYSTEM.

HEADACHE (cephalalgia), neuralgia of the cranium, and vertigo, are frequently feigned. Pain of all descriptions, existing often without evident external sign, is peculiarly liable to be simulated, because difficult of recognition. Headache, unaccompanied by some obvious disorder of the general system, need not become a question. Neuralgia of the cranium and tic douloureux may be simulated to escape disagreeable duty, but will rarely be persisted in to procure a discharge from service. Notwithstanding very violent pain is not incompatible with excellent general health, there can be no doubt that long-continued neuralgia will produce effects cognizable by the senses of the surgeon. Several cases of feigned vertigo have come under my observation, the alleged after-effects of *coup-de-soleil*. There have been four instances of it in the Fort Schuyler General Hospital. In none of them were there any appreciable lesions or impairment of any of the

functions or organs. All of them complained of strange sensations in the head, and vertigo. A singular expression was imparted to the countenances of two of them by wearing a handkerchief around the head; and a third wore green glasses. The striking discrepancy between the professions of these men, and the total absence of any physical or mental evidence of the truth of their assertions, was the important point in the diagnosis of these cases; and their subsequent histories fully confirmed the diagnosis.

“Pain, whether simulating headache, neuralgia in any of its forms, rheumatism, lumbago, or affections of the muscles, bones, or joints, is a symptom of disease so easily pretended that it is not to be admitted as a cause for exemption unless accompanied with manifest derangement of the general health, wasting of a limb, or other positive sign of disqualifying local disease.”*

Chronic rheumatism has the bad pre-eminence of being the disease most frequently feigned. In a series of 8283 discharges, for all causes, for part of 1861 and 1862, examined with reference to the comparative frequency

* Regulations of Bureau of Provost-Marshal General, Washington, 1863.

of chronic rheumatism as a feigned ailment, I find 791 discharges for this cause alone.

It became an evil of such magnitude that a General Order was issued by the War Department in 1862, prohibiting discharges for rheumatism. In all convalescent hospitals a large number of rheumatics encumber the wards, a considerable proportion of whom present no evidence of disease. Our service is not alone in respect to the great prevalence of this feigned disability: although not so common, the cases are quite numerous in the English and the French services.* The circular of the English Army Medical Department of 22d January, 1830, states that these affections are a fertile source of fraud, and that so long as men are discharged in consequence of rheumatism, instances of imposition will frequently occur. It is a matter of great moment to determine whether a man be feigning who professes to be affected with chronic rheumatism in any of its forms and situations. Whilst it is true that a man may suffer severe pain without affording any external physical evidence of it, it is no less true that a long-continued neuralgic or rheumatic affection of a nerve or a set

* Marshall, *op. cit.*, and Percy et Laurent, *Dict. des Sci. Med. op. cit.*

of muscles will produce some impairment of function or nutrition; so that a medical officer is justified in assuming that to be a case of imposture in which a rheumatic disease of long standing has produced neither of these lesions. "When the health is good and the seat of the alleged pain unaffected by swelling or increased temperature, a medical officer will probably in nineteen out of twenty cases be safe in concluding that no material or, at any rate, no permanent disease exists."* "In that case in which the rheumatism is accompanied by permanent rigidity of articulations, by wasting or atrophy of members, and against which the usual therapeutic means are used in vain, the man thus affected is a subject for exemption or reform."† "If there is not an evident wasting of the limb said to be affected, it is not a sufficient cause for excusing from duty or invaliding any class of military men."‡

It is fortunate that the treatment appropriate to chronic rheumatism is that which will be most likely to induce the malingerer "to give in," and that rheumatic pains unaccompanied with local or constitutional evi-

* Marshall on Enlisting and Discharging Soldiers, p. 104.

† Aide-Mémoire, op. cit. p. 99.

‡ Hennen, Military Surgery, p. 455.

dences of disease are not made worse by exercise, fatigue, police, or other military duty. It is not a little remarkable with what fortitude this class of malingerers will endure the application of counter-irritants, galvanic currents, firing, and other remedies of this class. They seem to think that to gain their object it is only necessary to affirm that they have pain somewhere, to put on the appearance of suffering, and to affect loss of power in the limbs. The back, loins, and hips are the parts usually selected; the knee, ankles, and superior extremities less frequently. The use of a crutch or a stick, and the ready submission to and apparent anxiety for the application of remedies, is considered by them an irrefragable proof of the reality of this alleged disability.*

There is a class of malingerers who decline to fix the locality of their pains, who content themselves with the assertion that they suffer "all over," and who spend their time in bed or in lounging about the wards, and can with difficulty be induced to take exercise in the open air. They oppose a passive resistance to all the measures of relief proposed for their benefit, are dull, listless, and apparently ab-

* Marshall on Enlisting and Discharging Soldiers, op. cit. p. 194.

sorbed in the contemplation of their sufferings. The points of diagnosis in these cases are as follows. 1st. The discrepancy between the objective and subjective phenomena of the alleged disability. 2d. The inconsistencies of the patient observed when he supposes himself free from *espionnage*. For instance, a man in the Fort Schuyler Hospital who had gone for months in a semi-erect attitude suddenly straightened himself and threw up his arms to pull down the cape of his great-coat, which a gust of wind wrapped about his head. Another instance: a man who had walked with great difficulty by the aid of a cane rushed to the steamboat-landing as the boat was pushing off, forgetting entirely his lameness. 3d. The failure of remedies to produce any result in the case, and the indifference of the malingerer to changes in the temperature and hygrometric condition of the atmosphere.

Paralysis, hemiplegia, paraplegia, and paralysis of one or more extremities, are sometimes simulated. They are, usually, easily enough recognized. In feigned paralysis the man may be surprised into the exertion of his will by a little address on the part of the surgeon. An instance occurred to me not long since. In passing by a man in the hospital who pro-

fessed to have paralysis of the left arm, I suddenly seized the paralyzed limb, without his being aware of my intention, and threw it up. Greatly surprised, and taken off his guard, *he exerted all his force to prevent my raising the arm.* His imposture was at once declared. In feigned paralysis there is no wasting of the limb or impairment of nutrition or sensibility, as in true. Besides, the malingerer can give no consistent account of the manner in which the disability occurred and of the progressive steps in the gravity of the lesions. He usually pretends to have received a blow by a shell upon the spine, or to have been exposed to cold and wet, the paralysis immediately supervening; or he pretends to have had rheumatism which has produced loss of power. The most usual form of feigned paralysis is loss of power confined to one of the upper extremities. This is a disability occurring so rarely to adults without some obvious local injury to nerves, that there can be no difficulty in detecting the imposition. As in the case narrated above, there will be found, in these cases of partial paralysis, neither loss of substance, impairment of nutrition, nor loss of sensibility. It has happened me to see many cases of feigned

paralysis; but none of them presented any difficulties in the diagnosis.

The proportion of cases of epilepsy discharged from the service since the rebellion, in the series of discharges examined by me at the Adjutant-General's Office, reached 22 per 1000 discharges for all causes. There can be no doubt that many of these cases were successfully feigned. The exact number I have no means of determining.

Authorities are not agreed as to whether there is a physiognomy peculiar to epilepsy, by which the existence of that disease in any given case can be infallibly recognized. Gavin—who, it appears to me, knew little of feigned disease by personal observation—says, “To the attentive observer the true epileptic is a man quite different from every other. It is rare to find in him any trace of hilarity, spirit, or vivacity. Nature, or rather disease, has impressed upon his face a character which seems to be composed of sadness, shame, timidity, and stupidity. * * * * * This peculiar physiognomy of epileptic patients generally renders the simulation of the disease very difficult.” This opinion is much too strongly stated. In my experience, there are undoubted epileptics who do not present these

physiognomical characteristics, nor, indeed, any evidences of disease whatever. Hence an examining surgeon will be frequently deceived in cases of dissimulated epilepsy.

Simulated epilepsy is easily enough detected. The malingerers in our service are not sufficiently well informed and skilful to produce an exact portraiture of the epileptic paroxysm. They overact the part, supposing, indeed, that it is only necessary to fall down upon the ground in some convenient place, to act violent convulsions, to strike all who approach them, and to struggle vehemently, in order to be believed. The milder type of epilepsy—the *petit mal* as distinguished from the *grand mal* of the French—is not feigned. Temporary loss of consciousness, unaccompanied by convulsions, would not suit the purpose of the simulator.

How exact and perfect soever may be the imitation of an epileptic paroxysm, there is a condition which cannot be imitated,—total loss of consciousness, accompanied by involuntary discharges. “The signs of epilepsy,” says the *Aide-Mémoire*,* “are numerous and various. Some are characteristic, carrying with them

* *Op. cit.* p. 111.

complete conviction and giving incontestable certitude. * * * * *

"The absolute loss of sensibility, the dilatation and the immobility of the pupil, are the characteristic signs of epilepsy. The other phenomena are variable in their intensity, as in their appearance : it is the constant presence of the first which renders them diagnostic of epilepsy."

Each of the simulated cases of epilepsy which it has happened me to see was a most lame and impotent attempt, by men who had had no opportunity to study the disease and who knew of it only by report. The fits were nothing more than a series of violent struggles and contortions, without loss of consciousness. In each case the pupils contracted on exposure to light, and the eyelids moved involuntarily when the eyes were threatened with a blow. These evidences of consciousness are not to be counterbalanced by such non-essential phenomena as frothing at the mouth, clenching of the hands, and discharge of urine and fæces, all of which may be produced by the voluntary efforts of the malingerer or by artificial means.

No man should be discharged on his own assertion that he is affected with epilepsy, or on the statements of others.

If a man claim a discharge on this ground, he may possibly, if requested to do so, give an exhibition of his infirmity; but ordinarily the fits occur when the surgeon is not at hand or not easily procured, and recovery almost invariably takes place before his arrival. The feigned epileptic selects his situation and opportunities, when his fits will draw the largest audience and excite the widest sympathy; for he relies upon the pressure of various influences upon the surgeon rather than upon his skill in imitating disease.

The discharges for mental imbecility, insanity, and other forms of mental disease, amount to nine per one thousand discharges for all causes. During the first twelve months of the rebellion the discharges for this cause were 11 per 1000, and in the second year 7 per 1000: so that it may be assumed that mental alienation is not one of the forms of disability feigned by our soldiers. These figures correspond to my own observation. I have seen few instances of feigned mental diseases,—not one instance of mania. All of those observed by me were cases of dementia, fatuity, or mental imbecility.

Mania is not easily feigned. In the attempt to produce conviction in the minds of his

superiors, the malingerer almost invariably overacts his part. This is not to be wondered at when we remember that almost all poets and novelists who have attempted the portraiture of insanity, except Shakspeare and Goethe, have succeeded in producing caricatures only. No one at all familiar with the appearance and manner of the insane could be deceived in a feigned case. Besides the difficulty of personating the countenance, manner, and language of an insane man, the simulator cannot maintain the character for a long period without yielding to exhaustion. The simulator cannot feign sleeplessness for many nights in succession, and pass many days without food or drink, as the insane do. But the most flagrant instances of imposture occur in feigned cases of idiocy, imbecility, or dementia. These are the forms of imposture most usual in our service. Loss of memory, incapability of learning his military duties, listlessness, slovenly habits, and a passive immobility of manner, are the peculiar signs exhibited by the malingerer. To detect the imposture, it is only necessary to have the man under observation at unexpected times, when he will betray his artifice, to study the evidences of intelligence and coherence in the expression

of his countenance, and to compare his previous history with his present symptoms.

Deformity of the spine, crooked-back, and "weakness in the back" the alleged result of rheumatism or of injury, are among the most common feigned disabilities in our service. The extraordinary persistence of the malingerer, who will pass months in the hospital bent in the most uncomfortable attitude conceivable, is a remarkable circumstance. Injuries produced by the explosion of shells, or by lifting heavy weights, or by extraordinary exertion in making a bayonet-charge or in assaulting the enemy's works or lines, are alleged as the circumstances under which the pretended disability occurred. By a judicious cross-examination, it will usually appear that the injuries were received *early* in the engagement. The contrast between the general condition of the patient and the severity of his pretended symptoms, and the absence of any evidence of a local lesion, are the means of diagnosis in these cases.

THIRD CLASS.

FEIGNED DISEASES AFFECTING NECK AND CONTAINED ORGANS.

SEVERAL cases of feigned aphonia have been observed in a hospital under my charge. The patients professed to have lost voice suddenly, without obvious cause. Two occurred after their admission into the hospital, and the others at a period long anterior to their admission. Without being able to assign any cause, and apparently indifferent to the impression their peculiar assumption might make, they contented themselves with the simple declaration of their inability to speak. If there be no evidence of local disease, or tumor, or aneurism pressing upon recurrent laryngeal nerves, or affection of brain or cervical spinal cord, no doubt can remain that the aphonia is feigned. This point being determined, it remains to induce the man to acknowledge his imposture and "give in." This has not been difficult in the cases I have seen, who regained their voices by being daily assured by their surgeons that their impostures were detected

and that it was not worth while to continue to act them. A sudden alarm at night when asleep, or the inhalation of ether or chloroform, continued to the stage of excitement will betray the malingerer.

Goitre is an exaggerated ailment. A simple enlargement of the thyroid gland, not complicated with malignant disease or osseous degeneration and deposit, is not a cause for exemption. I have seen not a few instances of this condition greatly exaggerated by soldiers for the purpose of procuring a discharge. They usually complain of interruption of breathing by compression of the trachea, or of head-symptoms by pressure on the jugular veins. There can be no difficulty in determining how far a goitre may interfere with these functions.

Wry neck, although sometimes attempted, cannot be feigned successfully. There is a peculiar prominence and rigidity of the muscles in a long-standing case, which cannot be accurately imitated. A more definite and important sign is the peculiar cast of the countenance, induced by the efforts of the features to accommodate themselves to the changed relations of the parts.

FOURTH CLASS.**FEIGNED DISEASES AFFECTING CHEST AND THORACIC ORGANS.**

In a series of 10,446 discharges on surgeon's certificate for all causes, I find 1564 discharges for phthisis alone,—a large number of them for "incipient phthisis." The simulated or factitious disability which bears a close resemblance to phthisis in its incipient stage is one of the most usually and successfully feigned in the whole range of diseases. Many of the physical and sensible signs of phthisis may be induced by cough maintained by habit. If to the cough be added bloody expectoration, the difficulty of diagnosis is increased. The blood may be derived from the gums or posterior nares, or from some extraneous source. A congested state of the throat and emaciation result from profuse tobacco chewing and smoking (follicular pharyngitis). A more common set of symptoms simulating phthisis are produced by masturbation,—not always for the purpose of feigning that disease, but any opportunity for deception is gladly seized. Close

confinement in a hospital-ward, a large portion of the time in bed, chronic cough maintained by the efforts of the patient, hæmoptysis, feigned or factitious, and low diet, eventually result in a condition which may be confounded by an incautious physician with incipient phthisis. Notwithstanding the great perfection to which the science of auscultation has attained, there can be no question as to the extreme difficulty of diagnosing incipient phthisis with certainty. The morbid despondency of the patient produced by long confinement, deferred hope, and weakened general health is increased by nostalgia, rendering the detection, as also the cure, of such a case, a matter of no little patience, skill, and tact.

In 10,446 discharges—the same series mentioned above—there were 629 for heart-disease. In 1131 discharges during the months of January and February, 1863, there were 217 for the same cause. This extraordinary increase in numbers is due to the increased number of feigned cases. Two causes have been in operation,—increased skill on the part of the malingerers, and ignorance or fraud on the part of the surgeons. The greater the number of discharges for a given disease, the more frequent will be the attempts at imposition.

Functional derangement of the heart is produced by various evil habits,—excessive tobacco-chewing, indigestion, masturbation, long-continued confinement in hospital, much of the time being passed in bed, habitual and prolonged reflection upon the condition of the heart, and, finally, nostalgia. Violent palpitation may occur at the time of the visit of the surgeon, excited by emotion, or it may be induced by sudden exercise. The malingerer invites attention to his heart, complains of pain in the cardiac region, violent palpitations, and difficulty of breathing. Before he forms an opinion, the surgeon should carefully compare the present symptoms with the history of the case. If the man have not had acute rheumatism, or have not followed the profession of a circus-performer, or stevedore, or hotel-porter, it may be assumed that the heart-trouble is either entirely feigned or factitious. No man should be discharged for heart-disease until the character of the lesion is definitely ascertained. The persistent assertions of the simulator should not stand in the way of thorough inquiry. Spasmodic asthma is imitated, but with slender success, by simply breathing hurriedly at the time of the visit. Asthma unaccompanied by emphysema, or disease of the

heart or large vessels, is a rare condition: hence there will be no difficulty in the diagnosis.

All the forms of thoracic disease, except incipient phthisis, simulated by soldiers, should be readily recognized. Discharges for phthisis should not take place until an unequivocal diagnosis can be made. Diseases of the heart are recognized by specific signs, which can be easily enough discovered by the surgeon, if he will take the time and trouble to make the necessary investigation. I have elsewhere given rules to facilitate the examination and decision in these cases.

FIFTH CLASS.

FEIGNED DISEASES AFFECTING ABDOMEN AND
DIGESTIVE APPARATUS.

DISEASES of the digestive system, both real and simulated, furnish a very large proportion of all the cases admitted into the general hospitals. The simulated diseases of this class are feigned, factitious, aggravated, and exaggerated. I have seen two instances of the power of vomiting at will. This power is with difficulty distinguished from the vomiting of a diseased state. It will usually be seen, however, that the vomiting is scarcely more than the act of regurgitation, that it occurs at the time of the visits and whilst the attention of the surgeon is attracted to it, and that, although of long standing, it has produced no visible emaciation and is without evidence of organic change.

Many cases of dyspepsia are produced by the evil habits heretofore mentioned as constantly in operation in lowering the general stamina and exciting real disease. Some men

have the power of enlarging the abdomen at will, without apparent effort, by filling the lungs, forcing down the diaphragm, and pushing forward the spinal column. These men go about, panting, with belly displayed in the most ostentatious manner, and pantaloons and drawers fastened together with cords, leaving large interspaces. A sudden blow upon the abdomen, or an emetic, will generally cause the phantom tumor to disappear; but sometimes the inhalation of an anæsthetic will be required. This peculiar factitious state must not be confounded with the enlargement of the abdomen in the convalescent stage of chronic diarrhoea or chronic dysentery.

It seems a work of supererogation to repeat here, what I have so constantly insisted on, that no disease should be accepted as real, when the man has a motive for deception, without proper examination and inquiry. Now, this is especially true of feigned diseases of the abdomen. Men are transferred from hospital to hospital on their mere assertion that they are afflicted with "liver-complaint," chronic diarrhoea, chronic splenitis, or other diseases of the abdominal viscera. None of these should be admitted without evidence. A state of emaciation, melancholy, and disin-

clination for the performance of duty are not always evidences of diseased condition. But especially do all those cases admit of reasonable doubt in which the general health remains unimpaired. Diarrhoea, of all the diseases of the digestive system, is most frequently feigned. Men continue months in hospitals who profess to pass many liquid stools daily, without sensible diminution in weight or physical vigor. These are objects of just suspicion. To detect them, it is only necessary to require the use of the close stool. But a liquid stool is not conclusive evidence; for the discharge may be factitious. Two men were detected, not long since, in the General Hospital at Fort Schuyler, producing diarrhoea by means of "Wright's Indian Vegetable Pills." One had a box wrapped in his shirt on his person, and the other a box concealed in his bed.

Hemorrhoids is one of the most usual exaggerated disabilities. External piles are not disabling. Internal hemorrhoids are sometimes feigned. They are not disabling when real, except large, ulcerated, or bleeding. A man frequently claims a discharge or lounges in a hospital who has a single pile, neither large, ulcerated, nor bleeding. Serious symptoms not unlike those produced by hemorrhoids accom-

pany fissures of the anus : hence a man should not be declared an impostor who believes himself the victim of the one, yet is really affected with the other lesion.

SIXTH CLASS.

FEIGNED DISEASES AFFECTING GENITO-URINARY
APPARATUS.

DISEASES of this class are frequently simulated; but the impostures are usually detected without difficulty. Hematuria has been feigned under my observation, and in one instance so successfully that the ward surgeon recommended the man for discharge. His symptoms were these: he complained of pains in the back, and went about in a semi-erect attitude,—of pain in making water, and passed bloody urine; but his appetite, digestion, and general appearance were strikingly at variance with his expressions of suffering. This want of harmony between the alleged symptoms and the state of the health induced me to look closely into the case. The urine presented under the microscope no evidence of disease, except the presence of blood-globules. I sent for the man to pass his urine in my presence. This he professed to be unable to do; but thereafter he ceased to pass bloody urine. Blood in the urine may be derived from the kidney, bladder, or urethra. In the first case

it is more intimately mixed with the urine; in the second, the blood is rarely, if ever, the only morbid product present; and in the third the blood is less intimately, or not at all, mixed with the urine. In making a diagnosis the condition of the kidney and bladder should be definitely ascertained by the microscope and chemical tests, by examination with the catheter and the sound; and all the attendant circumstances should be carefully investigated. If the blood have not been injected into the bladder, but have been incorporated with the urine after it has been voided, the imposture may be detected by requiring the urine to be passed in the presence of the surgeon, or by the use of the catheter.

Pains in the lumbar region, and "weak back" alleged to depend upon some obscure disease of the kidney, are amongst the most common causes of complaint with malingerers. There can be no doubt, I think, that lumbago, and hyperæmia of the kidneys, with albumen in the urine, and sometimes oxaluria, are occasionally produced by sleeping on the damp ground; but such cases are limited in number compared to the mass of those entirely fictitious. Foreign bodies are sometimes produced and exhibited as "gravel," to give color to ex-

pressions of disease. Not unfrequently the simulator contents himself with the assertion that he has "kidney-disease," and upon cross-examination will offer no other symptoms in proof of his statements than an increase in the quantity of urine and the frequency with which he voids it.

Quite a number of cases of incontinence of urine it has happened me to see in the military hospitals. In the series of discharges heretofore frequently mentioned, I find 22 discharged for this cause alone. Incontinence of urine, unassociated with any other diseased condition, is an extremely rare disease in the adult. In all the cases I have seen, the malingerer made no pretence of any other ailment. Uncomplicated incontinence of urine occurs in weak, sickly subjects who have ill-developed organs of generation. When complicated with disease of the bladder, paralysis, or calculus, there can be no difficulty in forming an accurate diagnosis. Men who feign incontinence do not always furnish the most easily prepared sign of the condition,—wet clothes; and by examining them unexpectedly they may sometimes be detected by this oversight. If the clothes be wet, the penis should be examined and the man required to make

water, or the catheter should be introduced. If these measures fail to expose the imposture, a large dose of opium may be administered, and the man waked up in the night to empty the bladder.

Stricture is sometimes feigned or exaggerated by officers to procure a leave on surgeon's certificate. Some men possess the power to prevent the introduction of the bougie or catheter without any effort that can be recognized, producing to the hand of the operator sensations not unlike those of stricture. In all cases of doubt, chloroform should be administered before the introduction of the catheter.

Varicocele and cirsocele are frequently exaggerated. In 10,991 discharges, for all causes, 116 were for varicocele alone. It may be assumed that a large proportion of these were discharged without adequate reason and for a degree of inconvenience not sufficient to constitute a disability. Varicocele is one of the most common infirmities to which men are subject; and if all recruits were rejected who presented themselves with it, many valuable men would be lost to the service. There can be no doubt that there may be some inconvenience to the soldier in a varicocele of moderate extent; but the discomfort is usu-

ally much exaggerated. Loss of virile power, which occurs when both testes are affected, produces a degree of despondency and physical lassitude which justifies discharge; but a double varicocele is rare. The most serious result to be apprehended in ordinary cases is atrophy of the testicle.

Hydrocele and sarcocele are frequently exaggerated in their early stage, when the inconvenience from their size and the pain experienced would be insufficient to authorize a discharge. The judgment and experience of the surgeon must decide in each case the degree in which it disables a man from the performance of military duty.

Gonorrhoea is both feigned and produced. I have not seen instances of the former, but have had reason to believe that men have availed themselves of opportunities to contract it. The irritation of the glans penis produced by retention under the prepuce of the cheesy secretion peculiar to that locality is sometimes aggravated, until a profuse discharge and swelling of the organ are brought about, or considerable ulceration of the glans. It may require some care and attention to distinguish such cases from gonorrhoea and chancre respectively.

SEVENTH CLASS.

FEIGNED DISEASES AND INJURIES AFFECTING
UPPER AND LOWER EXTREMITIES.

SOME of the feigned diseases of the extremities have been discussed,—chronic rheumatism and paralysis, in connection with affections of the cerebro-spinal nervous system. I do not propose to add any thing to what I have already said on these diseases.

Contraction of a joint, the alleged result of rheumatism or injury, is one of the most frequently feigned disabilities. The elbow, wrist, and knee are the joints usually alleged to be affected. The endurance of the malingerer is most extraordinary in submitting without a murmur to the violent measures proposed for his relief, and in maintaining a most uncomfortable position of a limb for many months. Contractions following gunshot wounds of soft parts are very frequently exaggerated, and aggravated by the persistent opposition of the patient to the means of cure. The nursing of the wounded limb is necessary in the first place to prevent motion and pain; but subse-

quently the attempt to use the limb is resisted, and the patient obstinately keeps it contracted, to secure a discharge from the service, and a pension. The elbow, wrist, fingers, and knee are the joints usually contracted in this way. Numerous instances have occurred under my observation of this wilful aggravation of a slight wound. In some instances the contractions are merely feigned, and no cause assigned for this result. In such cases, if the affected limb be manipulated by the surgeon, the voluntary efforts of the patient to maintain the assumed position will become very apparent. His feigned cries of distress at every movement, and the trembling of the muscles of the limb when fatigued, are quite characteristic. Sometimes, indeed, the voluntary retraction has continued so long that the limb has wasted, as from disease, and the muscles have accommodated themselves to the new relations of the parts. This has occurred in a case now in a hospital under my charge, the man having carried his knee flexed upon the thigh for nine months. Such a case presents peculiar difficulties in the diagnosis. All doubtful cases should be submitted to complete anæsthesia. Although a man subjected to strict surveillance may be detected, yet no testimony is so satis-

factory or complete as the results of anaesthesia.

Lameness was given as a cause of discharge in 71 in a series of 10,991 discharges on surgeon's certificate. Affections of the hip, knee, or ankle joint were probably the causes, real or pretended, of the lameness. Hip-joint disease is sometimes feigned. The patient can only simulate the objective phenomena of this disease successfully: he cannot counterfeit the evident marks of cachexy and suffering in the real disease. In a recent case occurring under my observation, there was no evidence of local disease, and the general health remained unimpaired, the posture and lameness of coxalgia only being assumed. Weakness of the knee or ankle joint is pretended, without other evidence of ailment than lameness. If there be no local or constitutional evidence of disease, the surgeon is justified in assuming that the disability is feigned, but is not justified in using unprofessional or unusually severe remedies.

An old fracture is frequently exaggerated by the malingerer to justify limping, and as a cause for discharge. There can be no reason why a well-united fracture in a soldier should be followed by results not at all usual in a civilian. In regard to this lesion, as in gun-

shot wounds, unwilling soldiers obstinately thwart the surgeon in the application of the means of cure, and persistently keep the limb out of use long after the necessity for quiet has ceased.

Feigned and factitious injuries are not uncommon. The cases of alleged contusion by the bursting of a shell, in which there is no local evidence of the injury, are so common as to be ludicrous. Mutilation of fingers is frequently seen. Whilst it is true that there are no invariable signs by which a self-inflicted wound may be distinguished from any other wound, it is equally certain that scarcely any man can give a satisfactory account of all the circumstances attending the mutilation. A fragment of a shell is not unfrequently alleged to have made a clean cut of the index finger; and it will be found frequently that the wound was received very early in the action.

Varicose veins are exaggerated. In 10,991 discharges, there were 213 for varicose veins. There can be no doubt that many of these did not come within the description of the large, voluminous, deep-seated varices, in which the valves have lost their functions and the limb become cedematous and ulcerated, which are held to be a ground of exemption or discharge.

Superficial varices, in which the valves perform their functions, and which do not cause swelling or ulceration of the limb or considerable pain, are frequently exaggerated, to obtain exemption, to be excused from duty, or to be discharged from the service.

In a hospital under my charge there were at one time not less than ten cases of swelling of one of the inferior extremities, which had existed in each of them for a considerable period. In some of them the swelling was hard, not pitting easily under pressure, and the integument rough and adherent, presenting the appearance of elephantiasis in its formative stage. None of these patients could assign a satisfactory reason for the occurrence of such a disability, although they usually ascribed it to lying upon the damp ground. Careful search at unexpected times, even at midnight, never disclosed the slightest trace of a ligature or pressure upon the veins. The swelling seemed to be produced by keeping the leg habitually crossed upon the other. For further information on the subject of disabilities from gunshot wounds, the reader is referred to the section on discharging soldiers.

EIGHTH CLASS.

FEIGNED DISEASES AFFECTING SKIN AND APPEND-
AGES.

No feigned diseases of this description have come under my observation. Ulcers are produced and exaggerated. There are no means of diagnosis between the genuine and factitious ulcer. In a suspected case the man should be closely watched, or he should be so constrained by a strait-jacket or other means as to put it out of his power to irritate or to apply irritating substances to his ulcer. I have seen many cases which seemed to be produced or aggravated.

The importance and the degree of suffering in various forms of cutaneous eruptions are occasionally exaggerated; but the severity of any specific pain or suffering, or the extent of loss of function, is easily enough determined by the surgeon.

SECTION III.

ENLISTING SOLDIERS.

CHAPTER I.

METHODS OF RECRUITING AN ARMY.

IN the United States service there are but two methods employed in raising an army,—voluntary enlistment of individuals, or a compulsory draft from the whole body of citizens.

The Romans, who were a nation of warriors, required every citizen to enlist as a soldier when the public service required it, from the age of seventeen to forty-six; nor at first could any one enjoy office in the city who had not served ten campaigns.* In certain wars and under certain commanders there was the

* Polybius vi. 17; Liv. x. 25, xlii. 32.

greatest alacrity to enlist; but this was not always the case. Sometimes compulsion was requisite, and those who refused were forced to enlist by fines and corporal punishment.* Mutilations were sometimes practiced to escape service: hence *pollice trunci*, "poltroons." Ordinarily, several causes of exemption from military service were permitted:—as age, if above fifty; disease or infirmity; office, being a magistrate or a priest; favor or indulgence granted by the Senate or people; and, finally, for serving out the period of military tenure.† In sudden emergencies, or in great wars, none of these excuses were held to be sufficient. When the states of Italy were admitted into alliance, they were required to furnish a certain quota, and the Consuls, when about to make a levy, sent them notice of the number of men they were expected to furnish.

Under the feudal system, levies of troops were involuntary. Every chieftain called out his retainers whenever it suited his interests or his ambition to do so, or when the king or emperor required an army; but armies were in those times less an institution of the state than the followers and retainers of a number of independent chieftains, who, whilst they

* Liv. iv. 53.

† Ibid. xxxix. 19.

flocked to one general standard, yet held allegiance to their immediate chief.

The French were the first in modern times to organize an official body to direct the civil administration of an army. Francis I., having experienced the signal inconvenience of mercenary troops, essayed the formation of a national army.* This innovation on the military feudal system was much improved during the reign of Henry IV. During the reign of Louis XIV. the military institutions rapidly approached perfection. The Revolution availed itself largely of all the improvements adopted or prepared in the last years of the monarchy, and substituted for the militia and voluntary enrolment the levy *en masse* and the military conscription. The law of 18 Fructidor, year 6, declared that the services of all citizens were due to the state. By the law of 1882, explained and illustrated by the laws and ministerial instructions of 1840 and 1857, numerous causes of exemption were admitted, substitutes authorized, and the bounty to volunteers withdrawn. At present the French army is recruited by conscription and by voluntary engagement.† The council of revision is the

* Didiot, Code, &c. op. cit. p. 414.

† Ibid. p. 439.

tribunal charged with the supervision of the recruiting service, to hear excuses, and to judge in public session the causes of exemption. The council is composed, 1st, of the prefect, or the councillor of the prefecture, as president; 2d, of a councillor of the prefecture; 3d, a member of the general council of the department; 4th, a member of the council of the district,—all of whom are named by the prefect; and, 5th, a general or superior officer designated by the Emperor. Besides these, a member of the *intendance militaire*, who represents the Government, has a consultative voice; the *sous-préfet* of the district, who keeps the reckoning of the young conscripts; and, lastly, the physician who makes the examination and ascertains the case of infirmity. The commandant of the depot of recruits attends the council of revision at their circuit; he takes note concurrently with the general officer and the *sous-intendant* of the aptitude, the height, profession, and physical constitution, of the conscripts.

The military surgeons who accompany the council of revision are chosen by the prefect, upon the indication of the division *intendants*, from among the physicians of corps or military

hospitals, who can be diverted habitually for this service.*

The decisions of the council of revision are fixed and irrevocable. The conscripts who are proclaimed free by the president are definitely liberated from that contingent, but may become the object of another decision by the council.

The strength of the Prussian army is maintained exclusively by involuntary levies. Every Prussian who has passed the age of twenty has been a soldier, or he is furnished with a medical certificate showing that he labors under an infirmity which disqualifies him for military duty. After a man has served three years in the standing army, he is transferred to the militia, a branch of the military force which is called out annually for a period of fourteen days. On reaching thirty-two years of age, he is transferred to another class of militia (the landwehr), a branch of the militia which is never embodied except in case of emergency. The physical defects which disqualify for service in the Prussian army are in almost all respects the same as those given in that part of this work describing the disqualifications for service in our army.

* Didiot, Code, &c. op. cit. p. 440 et seq.

Distinctions are made as to the qualifications of recruits for different arms of the service. The standard for the infantry arm is the highest. Recruits who are unfit for the general duties of the service are sometimes approved for garrison and veteran battalions.

The British army is recruited by voluntary enlistment. The ranks of the army are filled up from the lowest orders of society, because there are no opportunities for promotion and therefore no inducement for men of good social position and education to enter. Some gratuity is necessary to induce men to enlist; and for this purpose three kinds of remuneration are offered to the soldier: first, a sum of money to act as an immediate inducement to enlist; secondly, a daily rate of remuneration, as nearly as possible equivalent to the ordinary wages of labor; and, thirdly, a prospective provision after a fixed period of service.* Recruits are enlisted either by a regimental recruiting party, or under the direction of the inspecting field-officer of the recruiting district. The first are inspected by the medical officer in charge of the regiment or corps to which the

* Treatise on the Administration and Organization of the British Army, &c., Fonblanque. London: Longman, Brown, Green, Longman & Roberts, 1858.

man belongs, whose decision in regard to the qualification of the recruit is conclusive. The recruits enlisted under the direction of the recruiting staff are examined at the place where they engage, and subsequently by the staff surgeon of the district. No recruit is finally approved until he be examined and reported eligible by the medical officer in charge of the regiment or the depot of the corps in which he has enlisted.* Formerly the service of a British soldier was unlimited, or till legally discharged. At present the period of service is ten years for the infantry, and twelve for the cavalry and artillery.

The system of voluntary enlistment does not draw forth the best material of the country; and Englishmen begin to discuss the propriety of a conscription when the necessities of the state may require a large increase of their standing army. An able and earnest writer upon the subject of recruiting for the army has stated that "so strongly have the evils and dangers of this state of things impressed themselves on the minds of thoughtful men, that one hears it said on every emergency, even by those from whom such opinions were

* Marshall's Hints, &c. op. cit. p. 55.

least to be expected, that we must have a conscription.

“There are, indeed, but two possible modes of obtaining a good and efficient army and of keeping it permanently on foot. One is the method of conscription; the other, the method of making the army a desirable profession for rational men.”*

The bounty offered for enlistment has varied at different periods, according to the necessities of the nation. During the Peninsular War the bounty rose, for the best class of recruits, for the unlimited service to £23 17s. 6d., and for the limited service to £18 12s. 6d. In 1856, before peace had been declared, the bounty was £7. In the following year it fell to £2; but it is now fixed at £3.† During the wars of 1812 in which the British nation was engaged, the military and naval forces reached the large number of one million of men,—about one-twentieth of the then population of the islands. As the recruits for this large army were drawn almost exclusively from the manual-labor portion of the population, it is obvious that the Government entered into competition with the agricultural, mechanical, and manufacturing interests. With the increase in bounty there

* Quoted by Fonblanque, *op. cit.* p. 246. † *Ibid.* p. 247.

was a decrease in the standard of qualification. It was impossible to maintain a high standard when the number of recruits required bore so large a proportion to the whole body of the population.* I have elsewhere quoted the opinion of Mr. Marshall as to the character of the recruits who joined the army of the Peninsula.

I have been thus minute in giving the English experience in raising an army, because our own experience has been similar. The system of voluntary enlistment and the inducements of bounty and advance pay have been followed by the same results here: the ranks have been filled, but the quality of the material has not been commensurate with the expenditure.

The recruiting service for the regular army is conducted by the Adjutant-General, under the direction of the Secretary of War. The general recruiting service is for the army at large, and the regimental recruiting service for each regiment. Field-officers are detailed to superintend the recruiting districts, and lieutenants to take charge of the recruiting parties. Recruiting officers are instructed not to allow any man to be deceived or inveigled into the service by false representations, but to explain in person the nature of the service, the length

* Fonblanque, *op. cit.*

of the term, the pay, clothing, rations, and other allowances to which a soldier is entitled by law, to every man before he signs the enlistment. If minors present themselves, recruiting officers are required to treat them with great candor, to ascertain the names and residences of their parents or guardians, if they have any, who will be informed of the minor's wish to enlist, so that they may make their objections or give their consent. The consent of the parent, guardian, or master must be given in writing and witnessed; and no person under the age of twenty-one is to be enlisted without such written consent. No man having a wife or child can be enlisted *in time of peace* without special authority from the Adjutant-General's Office.

After the nature of the service and terms of enlistment have been explained to the recruit, the officer reads to him and offers for his signature the annexed declaration, which is appended to each copy of his enlistment:—

“I, —, desiring to enlist in the Army of the United States for the period of five years, do declare that I am — years — months of age; that I have neither wife nor child; that I have never been discharged from the United States service on account of disability or by

sentence of a court-martial, or by order before the expiration of my term of enlistment; and I know of no impediment to my serving honestly and faithfully as a soldier for five years."

The forms of declaration, and of consent in case of a minor, having been signed and witnessed, the recruit is then duly examined by the recruiting officer and surgeon, and, if accepted, the 20th and 87th articles of war are read to him, after which he is allowed time to consider the subject until his mind appears to be fully made up, before the oath is administered to him. As soon as practicable, and at least within six days after his enlistment, the following oath is administered to the recruit:—

"I, —, do solemnly swear, or affirm (as the case may be), that I will bear true allegiance to the United States of America, and that I will serve them honestly and faithfully against all their enemies and opposers whatsoever, and observe and obey the orders of the President of the United States, and the orders of the officers appointed over me, according to the rules and articles for the government of the armies of the United States." (See regulations of the recruiting service.)

In recruiting under the several calls for volunteers to make up the quotas of the re-

spective States, too frequently regiments have been filled up without examination of the men, and with little reference to the requirements of the recruiting regulations. The regimental recruiting, however, has since conformed more nearly to the regulations; for it was early seen that these regulations were founded in the necessity and fitness of things, and that although unsuitable or disabled men may fill up the rolls they cannot be made to do the duty of soldiers. The large bounties offered by the State authorities and the General Government, increased by the patriotism of private individuals, so far from elevating the standard of the recruit, became a bounty for fraud. This method of raising an army proved so expensive, and so little satisfactory as to the character of the material, that the draft became necessary.

Under the provisions of "the act for enrolling and calling out the national forces," approved March 3, 1863, the United States is divided into districts, of which the District of Columbia constitutes one, the Territories one each, and each Congressional district one. The act provides for a board of enrolment for each district, to be composed of a provost-marshal "and two other persons appointed by the President of the United States, one of

whom shall be a licensed and practicing physician and surgeon." "The 'boards of enrolment' are required to divide the district into sub-districts of convenient size, if they shall deem it necessary, not exceeding two, without the direction of the Secretary of War, and to appoint, on or before the 10th day of March next, and in each alternate year thereafter, an enrolling officer for each sub-district, and to furnish him with proper blanks and instructions; and he shall immediately proceed to enroll all persons subject to military duty, and shall note their respective places of residence as they will be upon the 1st day of July, 1863, their color, whether white or black, and their occupations, respectively."

The national forces thus enrolled are divided into two classes: the first of which comprises all persons subject to do military duty between the ages of twenty and thirty-five years, and all unmarried persons subject to do military duty above the age of thirty-five and under the age of forty-five; the second class comprises all other persons subject to do military duty. The second class are not to be called into service until the first class shall have been called.

All persons drawn in the draft are notified

of the same within ten days thereafter by a written or printed notice, to be served personally or by leaving a copy at the last place of residence, requiring them to appear at a designated rendezvous to report for duty.*

Section 2 of the enrolment act "provides that the following persons be, and they are hereby, excepted and exempted from the provisions of this act, and shall not be liable to military duty under the same, to wit: such as are rejected as physically or mentally unfit for the service; also, first, the Vice-President of the United States, the judges of the various courts of the United States, the heads of the various executive departments of the government, and the Governors of the several States. Second, the only son, liable to military duty, of a widow dependent upon his labor for support. Third, the only son of infirm or aged parent or parents, dependent upon his labor for support. Fourth, where there are two or more sons of aged or infirm parents subject to draft, the father or, if he be dead, the mother, may elect which son shall be exempt. Fifth, the only brother of children not twelve years old, having neither father nor mother, dependent upon his labor for support. Sixth, the father

* Regulations of Bureau of Provost-Marshal General, op. cit.

of motherless children under twelve years of age, dependent upon his labor for support. Seventh, where there are a father and sons in the same family and household, and two of them are in the military service of the United States, as non-commissioned officers, musicians, or privates, the residue of such family and household, not exceeding two, shall be considered exempt. And no persons but such as are herein exempted shall be exempt."

"The substitute whom any drafted person is authorized to furnish by section 13 of the enrolment act must be presented to the board of enrolment, and it shall be the duty of the board to examine him, and, if accepted, to place his name on the book of persons drafted, with explanatory remarks."

The commutation price for exemption authorized by the law is \$300; but the discharge furnished by the board of enrolment releases the conscript from no further liabilities than "this particular draft."

The object of these provisions of the enrolment act, and the regulations of the Bureau of the Provost-Marshal General founded upon them, is to secure an efficient army with the least possible expenditure of the life of the nation. There can be no question, I think,

that this object is closely approximated to, if not actually attained. It is obviously impossible to frame a conscription act which shall bear equally upon all classes. In the present order of things, there must be those upon whom the defence of the state devolves more immediately as a personal effort whilst to others it becomes an expenditure of substance and treasure. Moreover, as our experience in great wars and internal convulsions is limited, we must copy from those to whom great armies have become a necessity, satisfied if we may adapt their regulations to our own case with moderate success.

CHAPTER II.

EXAMINATION OF RECRUITS.

THE governments of all civilized nations, especially those to whom large standing armies have become a necessity, are fully alive to the great importance of the judicious and careful examination of recruits. The importance of this examination has a twofold aspect,—as a pecuniary question and as a military necessity. The Austrian regulations say that “the duty of inspecting conscripts and recruits requires the utmost skill, impartiality, and circumspection on the part of the medical officer.” The Prussian regulations for the medical examination of recruits set forth that “the duty of inspecting recruits and of determining whether they are fit or unfit for the military service of the country is one of the most difficult and responsible a military surgeon has to perform. To enable him to execute it correctly and with suitable promptitude, he would require more knowledge and experience than

is generally supposed: he must possess an intimate acquaintance with anatomy, physiology, and pathology. A knowledge of these sciences is essentially required to qualify him to decide on the health and general efficiency of recruits, and to distinguish between defects that may be real from those that are only feigned."

Dr. Fallot* says, "The duty of inspecting conscripts and recruits is not only an important but a very difficult task, partly in consequence of the obscurity of the indications or symptoms of some disabilities. But to ascertain the existence or name of a disability is not the only difficulty a medical officer meets with: he has also to appreciate the disqualifying degree of an infirmity, for the purpose of deciding upon the fitness or unfitness of a man for the army."

It will be perceived from the abstract of the French regulations and the composition of the councils of revision, given in the preceding chapter, that the qualification of conscripts considered in respect to military as well as medical relations is made a subject of prime importance in the French military system.

Paragraph 91 of the regulations of the bureau of the Provost-Marshal General says,

* *Memorial de l'Expert, &c.*, quoted by Marshall, *op. cit.* p. 37.

“The duty of inspecting men, and of determining whether they are fit or unfit for the military service of the country, requires the utmost impartiality, skill, and circumspection on the part of the examining surgeon and board of enrolment; for upon the manner in which this duty is performed will depend in very great degree the efficiency of the army.” To insure the careful attention of the recruiting officer and examining surgeon, the recruiting regulations affix a pecuniary penalty for the negligent or careless performance of this duty. If a recruit be rejected, when he joins the depot or regiment, for a mental or physical defect which existed at the time of his enlistment, and which might have been discovered by proper care and diligence by the recruiting officer or surgeon, they are held accountable for all the expenses connected with the enlistment.

“The examination by the examining surgeon is to be conducted in the daytime, in the presence of the board of enrolment, and in a room well lighted and sufficiently large for the drafted man to walk about and exercise his limbs, which he must be required to do briskly.”*

* Par. 94, Reg. of Bureau of Provost-Marshal General.

“The man is to be examined stripped.”*

The recruiting regulations require that the recruit be sober when enlisted. He should be washed before coming into the inspection-room. The propriety of conducting the examination in daytime only is obvious, for at night many important defects might escape detection which daylight would reveal. The necessity for having recruits or drafted men stripped for examination is so apparent that it would seem to be a work of supererogation to dwell upon it; but this regulation has been so frequently disregarded as to have become a gigantic evil. Early in the rebellion, it happened to me to be present at the muster in of several regiments of volunteers, and to make the physical examination of the men composing them. My duty consisted in walking through the ranks with the commanding officer, to point out those disqualified for military duty. I was not permitted to examine them stripped. During the progress of this hasty and most superficial examination I saw not a few blind, some variously deformed, and others decrepit from old age, and found it necessary to reject so many that the commanding officer was constrained to expostulate with me. “I know of several

* Par. 94, Reg. of Bureau of Provost-Marshall General, p. 95.

regiments," says Surgeon-General Hammond, "in which the medical inspection was performed by the surgeon walking down the line and looking at the men as they stood in the ranks."* I think it may be assumed that this was the usual practice when the first troops were raised in this war, as was also the case sometimes in the Mexican War.† Recruits or drafted men, actuated by motives of delicacy, may be disinclined to submit to an examination stripped. Such hesitation in a recruit may depend upon a concealed disqualifying infirmity, that he is unwilling to have exposed. In either case, the surgeon should inform the man that the practice of examining men stripped is invariable, that the ordeal will not last long, and that his secrets are kept inviolate. If the objection arises from timidity and delicacy alone, the surgeon should be kind in his manner, and patient, and not frighten a good recruit away by abruptness or indelicacy; if it arise from supposed concealed defects, more thorough examination and scrutiny should be made.

In practice it will be found more convenient to make the whole examination after the man

* Treatise on Hygiene, op. cit. p. 19.

† Examination of Recruits, Henderson, p. 79.

has been stripped. The clothes should be taken off in an apartment adjoining that in which the examination is conducted. Whenever practicable, this room should contain facilities for bathing and washing, so that the recruit may present himself in perfectly cleanly condition. Whenever practicable, also, the examination of recruits, if in considerable numbers, should be conducted in three rooms *en suite*,—the first for disrobing and washing, the second for the examination, and the third for dressing. Whilst one is being examined, another may be got in readiness, and thus no confusion or interruption occur. It is important that this first unpleasant experience of his new military life may be rendered as little unpleasant to the drafted man as possible; that in undressing and dressing he may not be exposed to the curious gaze of bystanders, and that he may feel that the persons whose duty it is to examine him do it in their official capacity in conformity to law. In the ordinary recruiting service the same precautions may be unnecessary; but kindness and delicacy are never expended in vain.

The age, stature, and what may be styled military aptitude of the recruit are determined by the military authorities. It becomes, then,

more particularly the duty of the surgeon to point out mental and physical disqualifications, real or pretended. To do this with certainty and success, he must have a uniform and prescribed course of examination, which shall develop latent defects of structure, deformities, or diseases.

Uniformity of examination will promote facility and celerity, which are not unimportant when large numbers of men are to be examined. But facility and celerity are less important than thoroughness. The duty must be well performed, if not quickly.

When he enters the inspection-room, the recruit or drafted man should be required to walk briskly in a circuit around the room, increasing his speed with each turn, until he has made three or four rounds. He should then be halted, and made to hop the same circuit, first on one foot and then the other. In this way the surgeon will probably detect any defect of conformation or want of power of the inferior extremities. Immediately upon halting, the surgeon should place his hand upon the præcordial region, to detect an abnormal action of the heart which this exercise may develop. He should then be placed in the position of a soldier under arms, with the

heels together and the knees about an inch apart. Whilst in this position, his head, ears, eyes, mouth, and nose should be examined, and the completeness of the performance of their respective functions carefully ascertained. His head should be examined for fractures, depressions, cicatrices, or diseases of the scalp. He should be tested as to the functions of hearing, of speech, and of sight, and as to the state of his intellectual faculties. The auditory canal should be looked into for foreign bodies, for discharges, for vegetations or tumors; the tongue, posterior fauces, palate, and teeth, for defects, loss of substance, mutilations, or tumors; the eye, for diseases of lid, of lachrymal apparatus, of conjunctiva, of cornea, of iris, of lens, or of deeper structures. The whole contour of the head and the expression of countenance should be observed, to detect the physiognomy of epilepsy, imbecility, or insanity. Next the neck should be examined for goitre, or other tumors, for cicatrices of old abscesses or burns, and for the integrity of the larynx or trachea. Next, in imitation of the recruiting sergeant or examining surgeon, the recruit should be required to stretch out his arms at right angles with the trunk of his body, then to touch his shoulders with his

fingers and place the backs of the hands together over the head: in this position he should cough, whilst at the same time the surgeon's hand should be applied to the abdominal rings. The recruit will then extend his hands, and perform the motions of flexion and extension of the fingers, of pronation and supination of the forearm, the elbow being applied to the side, and the motion of circumduction of the arm from the shoulder.

The chest should, next, be explored with the utmost care; its size, configuration, and expansive mobility should be noted, and search be made for diseases of the lungs, aneurisms or other tumors, and diseases or malformations of the heart.

The abdomen should be examined for hernial protrusions, extensive cicatrices from incised wounds, for laxity of abdominal rings, for hypertrophy of organs, for tumors, or collections of fluid in the peritoneal cavity. The testes and cords should be examined for chronic enlargements, varicocele, cirsocele, hydrocele, or sarcocele.

The next step is to require the recruit to lean forward upon his hands and place his feet widely apart: whilst in this position, the surgeon should separate the nates and examine

for hemorrhoids, fissures of the anus, fistula in ano, or urinary fistula.

The lower extremities should be examined with reference to extent of mobility or diseases of joints, for ulcers or old cicatrices, for nodes, caries, or necrosis, for aneurisms, for varices, or for malformations, deformities, or injuries of the feet. Each inferior extremity should be stood upon in turn, whilst all the joints of the other are being tested in all their motions; and the two extremities should be compared as to size, length, symmetry, and mobility.

An examination conducted in this way, if entered into with zeal, supported by a competent knowledge of anatomy, physiology, and pathology, can scarcely fail to expose all real and dissimulated infirmities and to develop the physical capacity of the recruit for the military service.

CHAPTER III.

QUALIFICATIONS OF RECRUITS.

THE standard of qualification for the military service varies usually with the necessities of the country. The limits of variation are, however, not very wide, for a certain degree of efficiency is absolutely essential to the soldier: below this none should be admitted; whilst beyond, the qualities so much esteemed,—good appearance, symmetry, and elegance of form,—although desirable, are by no means essential. The ideal which every examining surgeon will probably form in his own mind, and by which, consciously or unconsciously, he will judge the recruits who come before him, should not be formed after too complete a model. Under the operation of the enrolment act the same standard of efficiency may not be necessary as in recruiting for the regular army; for in the one case the service may not last longer than one, two, or three years; whilst in the other it extends

over five. Moreover, drafted men may be classified, as is done in the Prussian army, and assigned to different arms of the service, according to the especial fitness of their physical qualifications. Dr. Tripler* is of opinion "that the only safe rule is to insist upon a sufficient integrity of all the organs to enable a man to endure the greatest hardships for a severe campaign; and if the recruit is capable of this he is as fit to be enlisted for life as for three months." Whilst it seems to me this opinion is much too strongly stated, there can be no doubt that the lowest standard of physical efficiency required for military service is not separated by many intermediate degrees from the highest. The examining surgeon of drafted men should reject all those who do not come up to the lowest standard; but the examining surgeon of recruits for the regular army *may* reject all who do not come up to the highest. For instance, the regulations of the army fix the minimum height of the recruit at five feet three inches; but neither the enrolment act nor the regulations of the Bureau of the Provost-Marshal General have established a rule as to stature: hence, if a drafted man were pre-

* Manual for the Recruiting Service, p. 31.

sented five feet one inch in height, and otherwise physically capable, he must be accepted.

The chief physiological characteristics to be attended to in the examination of recruits or drafted men are: a suitable age, a sufficient stature, and a just correspondence between weight and stature, a capacious chest, aptitude of the limbs, and a perfect condition of the organs of sense; or, as they are tersely expressed in the instructions of the Director-General of the British army, addressed to examining surgeons, "a tolerably just proportion between the trunk and different members of the body; a countenance expressive of health, with a lively eye; skin firm and elastic; lips red; teeth in good condition; voice strong; chest capacious and well formed; belly lank; limbs muscular; feet arched and of moderate length; hands rather large than small."* Besides these physiological characteristics, there are certain other circumstances entering into the subject of the qualifications of recruits, as locality, occupation, race,—each of which affects either the health, stamina, or military aptitude.

AGE.—I have already discussed, in another section, the disqualifications due to youth or

* Marshall, *op. cit.* pp. 4, 15.

old age. The age for military service is fixed by the enrolment act for the minimum at twenty years and for the maximum at forty-five. Under the recruiting regulations the maximum age for a recruit is thirty-five and the minimum eighteen years. Marshall,* who had thorough knowledge of the qualifications of soldiers, derived from long experience in the British army, says, "The period during which a man's efficient service may be depended upon is limited to between twenty and forty years of age." There can be no doubt, I think, of the correctness of this opinion.

When the draft comes to be enforced, the claims for exemption on the ground of age may prove a subject of great embarrassment to boards of enrolment. Paragraph 66 of the Regulations of the Bureau of the Provost-Marshal General says, "The board shall require the enrolling officers to judge of the ages of individuals by the best information they can obtain in each case, but always to make a decision as to whether the person in question is subject to enrolment, and, if so, in which class, and to enroll him accordingly. The board will decide questions of exemption on

* On Enlisting and Discharging Soldiers, op. cit. p. 13.

account of age, when brought before it under the law by the persons enrolled." Paragraph 83 further says, "The affidavit of the person claiming exemption must in all cases be required to be supported by as much of the following testimony as can be obtained or may be deemed requisite :—

"1. By an authenticated extract from the legal registry of births, if there be any such registry.

"2. By any other authenticated documentary evidence tending to establish the fact of age.

"3. By the affidavit of parents.

"4. By the affidavit of such other respectable persons (not less than two), heads of families, as are most likely to be informed on the subject."

Circumstances may render such testimony difficult to be procured, or inadmissible from the character of the parties furnishing it. Besides, in voluntary enlistments, in which testimony of this kind is not required, the ages of recruits may be concealed. In either event, the examining surgeon, as a professional expert, may be required to judge of the age on physiological grounds. Are there any invariable marks by which a particular age may be distinguished? Adolescence is recognized by

the size of the head, the straightness of the spinal column, the lack of development of the extremities, and the absence of the third molars, or wisdom-teeth. At puberty characteristic changes occur: the voice alters, the beard begins to appear upon the chin, and hair upon the pubes; the body grows rounder and fuller; the extremities become developed; and from seventeen to twenty-one the "wisdom-teeth" appear. This last characteristic is the most specific sign of adult age. The bones at this period become thicker, the joints stronger, the shoulders broader, and the muscles firmer and more expanded; the fat of the cellular tissue increases, and, as life progresses, corpulency sometimes supervenes; but frequently, also, the fat which had accumulated begins to disappear at the middle period of life. Frequently the extremities, face, and neck become thinner, and the abdomen protuberant. Wrinkles on the forehead, and "crows'-feet" about the eyes, are amongst the earliest indications of advancing age. Further, the muscles become less plump, the skin is disposed in folds, especially about the neck, the generative organs become more relaxed, the integument of the scrotum more distensible, and the hair about the temples begins to turn gray. The change

in the color of the hair is the least decisive of these signs, for in some families, and as a result of disease or various excesses, the hair becomes gray at a very early period, and therefore is not always an indication of age. At about forty-five, and occasionally earlier, the *arcus senilis* appears in some subjects in one or both eyes.

Some persons arrive at the maximum of development much sooner than others, although living under the same external conditions, due to original differences in constitution. They also decline earlier. Some youths are more mature at eighteen than many adults at twenty-one. The divisions into periods of life by the years of existence are, therefore, arbitrary. They do not admit of universal application. The examining surgeon will, consequently, be influenced by the physiological phenomena of evolution or decay in the formation of his opinion as to the qualification of a recruit, and will not depend entirely upon the number of his years.

STATURE.—The standard height has varied in our service from five feet six inches to five feet three inches : it is at present fixed by regulation at the latter. The question of stature is not at all considered in the enrolment act,—

the determination of the physical capacity of the recruits being left to the judgment of the surgeon. This is, probably, wise. The stature to a limited extent only is a measure of the physical power of the soldier. Great stature, without corresponding weight and development, as well as diminutive size, is an abnormality. Uniformity of height, with lofty stature, are matters of great moment in European armies, especially in royal and household troops, where splendor of appearance is the most important part of their use; and these pleasing externals of the military profession may be regarded in the selection of recruits for our permanent military establishment; but necessity and efficiency are the only questions in connection with the height of drafted men.

The standard for the British service—five feet five inches—is the highest adopted by any European nation. The French is five feet one inch (one metre, 56 millimetres). When the soldiers of the two armies were serving side by side in the Crimea, the French appeared equally if not more capable of enduring the almost unprecedented fatigues of that famous siege.

In a series of 1439 town and country recruits examined in the London district,

106 were from 5 feet 5 inches to 5 feet 6 inches.

658	"	5	"	6	"	"	5	"	7	"
326	"	5	"	7	"	"	5	"	8	"
178	"	5	"	8	"	"	5	"	9	"
86	"	5	"	9	"	"	5	"	10	"
57	"	5	"	10	"	"	5	"	11	"

Twenty-eight were from 5 feet 11 inches to 6 feet 6 inches and upwards.* A stature less than 5 feet 5 inches does not appear on the above table, because no recruits are accepted in the British service below that height.

In a series† of 1000 French soldiers there were

62 of 5 feet 1 inch.	69 of 5 feet 7 inches.
156 " 5 " 2 inches.	49 " 5 " 8 "
187 " 5 " 3 "	22 " 5 " 9 "
178 " 5 " 4 "	9 " 5 " 10 "
152 " 5 " 5 "	5 " 5 " 11 "
107 " 5 " 6 "	2 " 6 " 0 "

The great superiority of the British army in respect to stature is clearly shown by the above tables; but, as already intimated, the French soldiers are not therefore less efficient and enduring.

The stature of recruits presenting for enlistment in our service, and of drafted men, will vary with the nationality, with the locality in which enrolled or enlisted, and with the occu-

* Marshall on Enlisting and Discharging Soldiers, op. cit. p. 5.

† Quoted on authority of M. Hargenvilliers, Hammond, op. cit. p. 28.

pation. "From the record of the recruits received at Newport Barracks, Kentucky (the Western depot for recruits), for the years 1853, 1854, and 1855, it appears that the mean height of

	Feet.	Inches.
Americans enlisted was	5	8.06
Irish	5	6.92
Germans	5	5.15
Scotch	5	7.30
English	5	5.86
French	5	6.50*

"The following table exhibits the mean height, in feet and decimals, of 1800 men, taken as they were entered upon the lists of recruits filed in the Adjutant's-General's Office. The results are given for one hundred men from each State":†—

* Tripler's Manual, &c., op. cit. p. 12.

† Medical Statistics of the United States Army, from 1839 to 1856, op. cit. p. 633.

STATES.	MEAN HEIGHT.	SIX FEET AND OVER.	GREATEST HEIGHT.	
	Feet.		Feet.	Inches.
Indiana	5.7604	18	6	4½
Kentucky.....	5.7729	18	6	3½
Ohio	5.7537	15	6	3½
Tennessee	5.7779	18	6	3
Maine	5.7314	11	6	2
Vermont and N.Hampshire	5.6951	6	6	1
Massachusetts and Conn't.	5.6821	5	6	3
North Carolina.....	5.7814	24	6	3½
South Carolina.....	5.7729	15	6	4½
Alabama.....	5.7647	17	6	4
Virginia.....	5.7488	15	6	2
New York	5.6505	4	6	1½
Pennsylvania	5.6756	5	6	1
New Jersey and Delaware.	5.6509	6	6	1
Maryland	5.7130	9	6	2
Illinois.....	5.7696	17	6	3
Missouri	5.7162	8	6	1½

Six hundred soldiers, in a general hospital under my charge, representatives of a large number of regiments, were measured as to stature with the following results: 568 were above the regulation standard, and only 32 below it. Of those above the regulation standard there were

56 from 5 feet 3 inches to 5 feet 4 inches.
77 " 5 " 4 " " 5 " 5 "
92 " 5 " 5 " " 5 " 6 "
109 " 5 " 6 " " 5 " 7 "
87 " 5 " 7 " " 5 " 8 "
41 " 5 " 8 " " 5 " 9 "
54 " 5 " 9 " " 5 " 10 "
33 " 5 " 10 " " 5 " 11 "
15 " 5 " 11 " " 6 " 0 "
4 " 6 " 0 " " 6 " 2 "

The general average thus appears to be considerably above the average of stature in armies of Continental Europe.

Notwithstanding this result, it is questionable whether our American soldiers are more physically capable of enduring the fatigues of war. "In general," says the *Aide-Mémoire*, "men not very tall, and otherwise well built, resist better the fatigues of war, and are more active, than the very tall." All medical officers who have served with troops in the field must have observed the superiority of men of middle height in respect to endurance and activity. The reason of this is obvious. Very tall men usually present evident defects of conformation. The increased height is produced by the undue development of the lower limbs, and is not accompanied by corresponding development of the chest, which is often narrow and contracted: rarely is there increased length of the body. Not only is a man of great stature easily fatigued, because the levers he has to move are longer, and the muscles less developed, but he breaks down more readily under diminished supplies of nutriment, because he requires more for his subsistence than his smaller comrade. I think it will be found as a rule that men of six feet two inches and upwards are

more objectionable than men of five feet one inch, or even five feet. It is not uncommon to see in our volunteer regiments men of five feet who have undergone without flinching all the hardships of this war. The proportion of men of six feet and upwards in our hospitals suffering from diseases—chronic dysentery and diarrhoea, hemorrhoids, &c.—is much greater than men of medium height.

The height of a recruit is determined by the recruiting officer. The real height often differs materially from the apparent. A small recruit, very anxious to enlist, may increase his height by artificial means, of which there are some curious instances on record; a drafted man may wish to diminish his real height so as to fall below the standard. By cutting his hair close to his head, and removing the thick cuticle from the soles of the feet, by flexing the head forward a little, protruding the abdomen, and slightly bending the knees, a man, without being detected, may lessen his apparent height a half an inch or more. Whenever there is a suspicion of fraud, the recruit should be measured extended on his back. In fifty-two recruits measured by Mr. Marshall with the same standard, with the view of determining how much the horizontal length of

a man exceeds the perpendicular height, in 5 the horizontal length exceeded the perpendicular height $\frac{1}{2}$ of an inch; in 5 the horizontal length exceeded the perpendicular height $\frac{3}{4}$ of an inch; in 13 the horizontal length exceeded the perpendicular height $\frac{1}{2}$ of an inch; in 14 the horizontal length exceeded the perpendicular height $\frac{1}{2}$ of an inch; in 15 there was no appreciable difference.

In the examination of recruits or drafted men, height is to be considered in connection with weight, muscular and osseous development, and capacity of thorax.

WEIGHT.—That weight which is at once an evidence and a measure of physical power must not be confounded with obesity, which is a diseased state. There should be a just correspondence and proportion between the age, stature, and weight of a recruit. A man at twenty years of age should weigh not less than one hundred and twenty-five pounds; and for every inch of height above five feet five inches his weight should increase five pounds (Hammond.) Neither the recruiting regulations, nor the regulations of the Bureau of the Provost-Marshal General, have established any rules as to a minimum or maximum weight. Within the limits already indicated, weight is

a better standard of physical power than stature. Every recruit or drafted man presented for enrolment, who does not evidently conform to a proper standard of weight, should be placed upon a platform scales, with which every recruiting rendezvous should be furnished. The minimum weight should be established by regulation. In recruiting under the enrolment act, there can be no question that a man weighing less than one hundred and ten pounds, and five feet in height, should be exempted. Recruits for the regular military establishment, five feet three inches high, should not be admitted weighing less than one hundred and twenty pounds. Men reaching the regulation stature of less weight than this have either some constitutional tendency to disease, or have been exposed to depressing influences retarding growth and development. The preponderance of height of American soldiers is counterbalanced by deficiencies of weight. It is said that our national habit of tobacco-chewing is a potent cause of the national leanness. It undoubtedly interferes with both primary and secondary assimilation. The use of tobacco is a most prevalent habit in the army. In a hospital under my charge, containing at present eight hundred and thirty-

six patients, five hundred and fifty-eight use tobacco in some form,—many of them immoderately. The dryness of the climate has something to do with the thinness of Americans. Americans of medium height, and stoutly and compactly built, are undoubtedly better subjects for the military service than the tall. Besides the question of the physical qualification of men of small weight, there are certain mental phenomena due to size worthy of being considered. Small men, as a rule, are more cheerful, active, and enterprising than large men; to the extent of their capacity, they endure hardships and fatigue with more cheerfulness, and recover with more promptness from the depressing influences of defeat.

The maximum as well as minimum weight should be definitely fixed by law or regulation. Excessive obesity is contained in the list of disqualifications for military duty. Under ordinary conditions of stature and development, no man weighing more than two hundred and twenty pounds is fit for active military service. "The expression 'strong constitution,'" says the *Aide-Mémoire*, "is sometimes deceptive when applied to an individual who is remarkable only for predominance of the lymphatic and muscular systems. In fact, it often hap-

pens that the athlete of herculean frame presents organic affections which render him unsuitable for military service, and which an attentive examination only will reveal."

CAPACITY OF THORAX.—The vital capacity of the chest is one of the best indications of the physical power of an individual. A narrow and contracted or malformed chest is usually associated with the strumous diathesis, with diseases of the contained viscera, or is an evidence of feeble constitution or want of stamina. The researches of Mr. Hutchinson,* who has furnished nearly all our information on this subject, have developed some very curious and interesting results. His methods of investigation are too elaborate to be used in the ordinary examination of recruits; but his conclusions are capable of a very valuable application. Every recruiting rendezvous should be supplied with a graduated tape, or one of Sibson's chest-measurers.† The spirometer of Hutchinson requires too much careful manipulation to make it useful; and the results determined by it are affected by the height and weight, by the manner in which inspira-

* Article *Thorax*, in *Cyclopædia of Anatomy and Physiology*.

† Figured in *Bennett's Principles and Practice of Medicine*, and in *Hammond's Hygiene*.

tion and expiration are accomplished, by the muscular force and other circumstances.

The chest-measurer, or the simple graduated tape, will determine all the questions as to the capacity of the thorax necessary to be determined by the examining surgeon. A more convenient method consists in measuring the distance between the nipples with a pair of dividers, or a graduated rule, and multiplying the result by four (Hammond). If one side of the chest is to be measured for the purpose of comparison, one end of the graduated tape should be placed on the sternum midway between the nipples, and the distance measured between this point and a spinous process of a vertebra on the same plane.

The quantity of air which can be expelled from the lungs by a forcible expiration, after the deepest inspiration that can be made, is named by Mr. Hutchinson the "vital capacity." He found that, at a temperature of 60° F., 225 cubic inches is the average vital capacity of a healthy person five feet seven inches in height. For every inch of height above this standard the capacity is increased on an average by eight cubic inches; and for every inch below it is diminished to the same amount. The capacity of the chest is determined mainly by

the mobility of the walls of the chest; but why this mobility should increase in a definite ratio with the height of the body must be difficult of solution, since the height is chiefly determined by the length of the legs, and not by the length of the body or depth of the thorax. This curious result arrived at by Hutchinson, and confirmed by Surgeon-General Hammond and various other observers, is called in question by Surgeon Tripler,* who says, "Our observations have led us to the conclusion that the mobility is rather inversely as the circumference of the chest than directly as the height of the person,—as if increased mobility were designed to make up for a less capacity, as indicated by a less diameter: so that the quantity of air consumed does not differ greatly in different men with healthy lungs, whatever may be their relative stature."

For every inch of height the minimum chests increase half an inch, the medium chests somewhat more, and the maximum chests five-eighths.

The extent of mobility of the thorax is a tolerably accurate measure of the respiratory power or vital capacity. To ascertain this, the

* Manual, op. cit. p. 22.

chest is measured—1st, when expanded to its utmost capacity; 2d, when the air has been as completely as possible expired. The difference is the extent of mobility. The tape should be applied *immediately* above the nipples (Hutchinson), or over them (Hammond). Measured at this point, the extent of mobility varies in healthy persons from two to four inches. Dr. Tripler* objects to this position of the tape. "Now, by passing a tape around the chest *above* the nipples, when the arms are extended above the head (as they ought to be), the margins of both the latissimus dorsi and pectoralis major muscles will be included, as well as the fatty development of the breasts themselves; this will give an increased measurement to the parietes of the chest; and, when a forced inspiration and expiration are made, the swelling and relaxation of these muscles will give an apparent mobility greater than real. We measure the circumference of the chest by passing the tape around it immediately at the point where the border of the latissimus dorsi springs from the trunk. The tape will then be found to fall *generally below* the nipple. In this way we find the mobility of the chest is usually

* Manual, op. cit. p. 23.

two and one-half inches, and seldom exceeds three. Once only have we found it four." I confess it does not seem to me clear how this mode of measurement can better ascertain the *mobility* of the chest, or produce results different from those obtained by other observers. The average degree of mobility is three inches; and two inches should be considered the minimum for military service. Less than this indicates actual disease, or a decided tendency thereto.

Hammond is of opinion that no recruit, in whom the circumference of the chest immediately over the nipples measures less than half the height, should be accepted.

For the purpose of ascertaining the mean girth around the chest of men of different heights, Dr. Balfour, staff assistant surgeon, while he was acting in London as district surgeon, measured 1439 recruits, and constructed the following very interesting table:—

QUALIFICATIONS OF RECRUITS.

HEIGHT OF THE RECRUITS.	TOWN RECRUITS.				COUNTRY RECRUITS.				AGGREGATE.			
	No. exam- ined.	Average size of chest.	No. found fit.	Average size of chest.	No. exam- ined.	Average size of chest.	No. found fit.	Average size of chest.	No. exam- ined.	Average size of chest.	No. found fit.	Average size of chest.
Ft. In. Ft. In.	In. Dec.	In. Dec.	In. Dec.	In. Dec.	In. Dec.	In. Dec.	In. Dec.	In. Dec.	In. Dec.	In. Dec.	In. Dec.	In. Dec.
5 5 to 5 6	83	32.44	53	32.54	23	32.77	20	32.66	106	32.51	73	32.57
5 6 to 5 7	425	32.03	279	32.19	233	32.71	197	32.80	658	32.15	476	32.44
5 7 to 5 8	223	32.24	127	32.53	103	33.11	98	33.13	326	32.52	220	32.79
5 8 to 5 9	122	32.57	79	32.81	56	33.00	47	33.18	178	32.70	126	32.93
5 9 to 5 10	58	32.76	33	32.59	28	33.75	23	33.57	86	33.08	56	33.00
5 10 to 5 11	44	32.54	27	32.94	13	33.61	8	33.81	57	32.77	35	33.14
5 11 to 6 6	20	32.92	10	33.00	3	33.67	2	35.00	23	33.02	12	33.38
and upwards.	4	32.38	1	32.00	1	33.00	1	33.00	5	32.50	2	33.50
	979	32.06	609	32.22	490	32.91	391	32.99	1439	32.47	1000	32.66

In one hundred and fifty recruits examined by Dr. Tripler, the height ranged from five feet four and a half inches to five feet eleven and a half, and the circumference of the chest varied from 29.5 inches to 38 inches, and the mobility from two to three inches. The mean circumference was 33.97 inches. The least circumference was in the tallest man, and the greatest in a man five feet eight and a quarter inches. Assuming that the circumference of the thorax should equal one-half the height, a man five feet three inches should measure around the chest thirty-one and a half inches. In practice, this rule for ascertaining the relative capacity will be found of great utility. For every inch of increase in height there should be an increase of half an inch in the girth of the chest. No man should be enrolled or enlisted having a less circumference of the chest than thirty inches.

Besides the determination of the capacity, measurements should be directed to ascertain the symmetry and correspondence of the two sides of the thorax.

APTITUDE OF THE LIMBS.—Aptitude does not necessarily include symmetry. The first depends upon development of bones and muscles, including bony and muscular prominences, fre-

quently in striking contrast to the second. The lateral sections of the body are more symmetrical than the inferior and superior parts. The right arm is usually thicker and more developed than the left in right-handed persons,—due of course to greater use; but there is no appreciable difference, usually, in the inferior extremities. The inferior extremities are sometimes so large and cumbrous as to be out of proportion to the body and upper extremities, constituting a serious defect of conformation.

It is especially important that the joints be mobile, and capable of performing all their functions. Without any obvious defect of structure, sometimes the hands and fingers have lost their mobility from long application to certain employments, as in shoemakers, day-laborers, &c. The same imperfection of motion results in the lower extremities in some employments. Each joint should be carefully tested to determine its integrity, in the manner heretofore indicated.

CONDITION OF THE ORGANS OF SENSE.—No point in the examination of recruits is more important than this. A good recruit will have in perfection the use of the organs of sight and hearing. If the right eye be free from defects,

minor affections of the left may not be a cause of rejection or exemption from service. There are congenital irregularities and deficiencies of the iris unsightly enough to constitute a deformity, yet not impairing function: these would not interfere with the usefulness of the man; and hence that surgeon would ill discharge his duties who considered them disqualifications. But the eyes are organs so essential that the utmost care must be exercised in testing their integrity. This care is particularly necessary in determining exemptions for short or long sight.

The function of hearing, though less important than sight, should be unimpaired. A soldier needs to hear quickly as well as accurately. The examining surgeon should test this faculty by talking in a high and in a low tone, to ascertain the degree of sensitiveness and accuracy of the organs. The two functions of sight and hearing should in the perfect soldier have their fullest development. Experience and use, but more than all necessity, educate these faculties; but the degree of perfection which they may attain will vary in different individuals.

The senses of taste and smell are much less important to the soldier. Their absence may

indicate centric or eccentric lesions of nervous system of grave character, but otherwise would not be a subject for serious apprehension, except the consequent interference with some of the enjoyments of the soldier, or with his ability to discern certain kinds of injury to his health or constitution.

There remains to be considered, under the head of the qualifications of recruits, the influence of *locality, occupation, race*, upon the quality of the material offering for enlistment or becoming the subject of involuntary levies. In a country such as ours, having so great variety of climate and soil, numerous trades and professions, and representatives of many nationalities and races, these questions of *locality, occupation, and race* have an immediate interest and importance to the subject in hand.

LOCALITY affects the question of the suitability of a recruit in respect to the hygienic conditions to which he has been subjected, and the influence of these conditions upon his health and stamina. In the English service important distinctions are made between town and country recruits, preference being had for the latter, owing to their superiority in development. This superiority is exhibited, not in height,—for the great social statist M. Vil-

lermé has shown that in this respect the inhabitants of cities are superior,—but in the development of the chest and extremities, and in power of endurance. Wherever large numbers of human beings are crowded together in small spaces, as in cities, the general standard of health and physical efficiency becomes lowered. “For the whole of France,” say Maillot and Puel,* “the average of exemptions for feebleness of constitution is 189 per 1000; but for the sixth group (*Champagne*) it is 292, and 290 for the seventh (*Lorraine-Alsace*). It clearly results, therefore, that in those parts of the country where the population is very dense, the industrial interests active, and the civilization has attained a high development, there are a greater number of individuals of weak constitution.”

The character of a given locality as to productiveness of the soil influences the physical development. Poverty and wretchedness stunt the growth and impair the strength and activity. Abundant food, *cæteris paribus*, increases the size and stature. Luxuriance of living and idleness are as fatal to the production of healthy men as poverty. The Gauls

* *Aide-Mémoire, medico-legal, &c. op. cit. p. 7.*

(Belgæ) and Teutonic nations were superior in stature and weight to the civilized Romans. Pastoral nations generally are more robust than manufacturing and mechanical.

In the United States the influence of locality upon the physical qualities of recruits is seen more especially in malarious regions. Paludal poison, operating through several generations, lessens the reproductive capacity of a people, the size, weight, and stamina, and impairs the intellectual faculties. Goitre is becoming endemic in some localities; and cretinism will appear at a period not very remote.

OCCUPATION comes more immediately to be considered than locality in the selection of recruits. Trades and professions requiring confinement in-doors, and the collection of large numbers of men in communities, have a very depressing influence upon the health and physical efficiency. Hence regiments raised from the class of artisans and mechanics are less efficient than those raised in the rural districts and composed of farmers. This is now witnessed on a large scale in our army, in the comparative endurance, stamina, and activity of regiments from different localities. The factories and workshops do not turn out such men as the lumbermen of Maine and Pennsyl-

vania or the farmers of the Northwest. As a necessary corollary of lowered vitality we find less courage and enterprise. Men devoted to in-door occupations and to the peaceful arts are indisposed to face the dangers and are anxious to avoid the fatigues and hardships of war.

Certain kinds of mechanics are objectionable,—tailors and shoemakers. Men who have followed these professions uninterruptedly for fifteen or twenty years, if they have entered them early in life, are commonly unfit for soldiers. Permanent flattening of the thorax, and gibbosity, with diminished vital capacity, occur in these occupations.

RACE.—The army of the United States contains representatives of many races and nationalities, differing widely in physical stamina and in aptitude for the military service. There are three principal types,—European or Caucasian, Negro, American; the last-named in very insignificant numbers. The European type is composed mainly of the Saxon, Teutonic, and Celtic races,—usually variously commingled, and, after the lapse of several generations, forming a type distinctive of the country. This is the type best fitted for warlike achievements, most intelligent, enduring, and having the

highest standard of physical qualification. Moreover, the European has a capability of adaptation to climate greater than any other race.

Besides the mixed European, which has gradually assumed national characteristics and is sometimes styled the American race, there are in our army many Germans, Irish, Scotch, and French, who preserve not only their native language and manners, but all the physical peculiarities of the races from which they have sprung. As far as my observation extends, the Germans are the least desirable recruits from this true foreign population. They are less capable of enduring fatigue, are more frequently the subjects of rupture, varicose veins, and deformities of the feet, and more addicted to malingering than either of the other races.

Of all the soldiers presenting for enlistment in our service, the Irish are most capable physically. Less in stature than Americans and less obese than Germans, they have usually greater muscular development, more capacious chests, tighter joints, and more abundant vitality than either of the others.

The Scotch, of all the foreigners in our army, are the most efficient soldiers. They are not remarkable for considerable stature, weight, or

symmetry, but for compact, sinewy, hardy frames, for contempt of fatigue and danger, and for steadiness and courage under fire, and impetuosity in a charge.

The peculiarities of the French race, and their military qualities, have been so frequently alluded to in preceding pages that it is not necessary to enlarge upon them here.

An estimate of the military qualities of the negro must necessarily be based upon his physical and mental peculiarities. In the United States the pure African is rarely found. The mixture with the white elevates his intellectual power and gives symmetry to his form, but lowers his health and physical efficiency. Few negroes having admixture with white blood are free from scrofula, independently of locality. But, having a limited power of adaptation to climate, and being fitted by nature for a warm and humid atmosphere, he is unsuited to military service in cold latitudes, in which he soon falls a prey to scrofula, loses the power of reproduction, and becomes extinct in a few years. Years of servitude, respect for authority, and the simplicity and enthusiasm of his nature, peculiarly fit the negro for habits of military discipline. He can be made a mechanical soldier to great perfection, skilled in the use

of arms and the machinery of tactic, and, by reason of the obstinacy of his disposition and the depth of his passions, may become most powerful in a charge or in resisting the onset of an enemy. He can do little of himself: he must have a head which he at once fears and respects. In those military operations which require each individual to act for himself, the negro cannot be relied on. He is fitted for heavy infantry or for artillery, but not for light infantry, for skirmishing, or for outpost duty.

In an examination of the physical qualifications of negro troops, the surgeon's attention must first be directed to ascertain the degree in which admixture with white blood has lowered their health and stamina. The traces and evidence of scrofula must be examined into, if existing, and preference given, *cæteris paribus*, to the black. The aptitude of the limbs—especially the mobility of the fingers, the development of the forearm and of the calves of the legs, and the formation and condition of the feet—must be regarded. Splay feet and ill-developed calves are frequent in the negro. Convexity of the arch of the foot, decided internal inclination of the inner malleolus, and turning out the toes, render many of this race unfit for service on foot. The rules given in

foregoing parts of this work, for the rejection of recruits or drafted men for various disqualifications, apply as well to the negro as to the white man. Besides the color of his skin, his prognathous jaws, shape of cranium, length of forearm, thinness of calves, and flatness of feet, there are no physical peculiarities making him different from white men.

The American race is represented to a most limited extent in our army, and the few found are half-breeds, semi-civilized. The Indians sometimes serve as allies; but their instincts and habits are entirely opposed to rules of war and discipline. The same physical results from the admixture of white and Indian races follow as in the admixture of the white and negro,—rapid degeneracy, and ultimately extinction. The pure Indian is greatly inferior to the white race in physical power, in weight, stature, and longevity.

A considerable force of Spanish half-breeds was raised in New Mexico early in the rebellion, and I believe still continue in service. A more cowardly, mentally and physically inferior, and treacherous race can scarcely be found than this mixed Spanish-Indian population of New Mexico. Poverty, filth, disease, and hereditary and slavish submission to their supe-

rriors have so far degraded the race as to render them unfit for military service. Their conduct at the only serious engagement into which they have thus far been led (at Valverde) justifies this opinion of their worthlessness. They have nothing in common, except language, with the illustrious conquerors of the New World from whom they are descended.

An unprejudiced view of the various races and nationalities forming our army will disclose the fact, I think, that the fused European nationalities constituting what is now known as the North American race, and which begins to assume characters as distinct as those of the English, French, German, or Spanish races, is better fitted for military purposes than either or all of the representatives of foreign nations.

Called out by involuntary draft, and subjected to a rigid inspection, which shall separate those too tall, the feeble, and those disqualified by infirmities, our army will present a splendor of physical appearance and development second to that of no other army in the world.

SECTION IV.

DISCHARGING SOLDIERS.

CHAPTER I.

GENERAL CONSIDERATIONS.

SOLDIERS are discharged by reason of expiration of enlistment, on their own application after twenty years' service, by civil authority, by sentence of a court-martial, by order of the War Department or General-in-chief, or on surgeon's certificate of disability. Under the law of May 14, 1862, the Medical Inspector-General, or any medical inspector, has power to grant a discharge upon his own certificate, provided it is given after a "personal inspection of the soldier and with the soldier's consent, and for a disability the nature, degree, and origin of which are correctly described in the certificate." By General Orders No. 137, War

Department, May 18, 1863, "the power given the medical inspectors of the army to discharge soldiers for disability is suspended until their duties in this respect are defined by regulations, to be published hereafter."

The giving a certificate of disability for discharge is one of the most important duties a military surgeon has to perform. Although his certificate is the ground of action, and not the authority to discharge, the military commander is governed in the exercise of his powers by the statements of the surgeon. The great importance of a correct and conscientious performance of this duty is sufficiently shown by the fact that up to May 9, 1863, there had been received at the Adjutant-General's Office, Washington, since the commencement of the rebellion, 143,303 certificates of disability. These were certificates upon which discharges had been granted in the usual way. But if to these be added the considerable number of irregular discharges, and those instances in which the certificates have not been forwarded to the Adjutant-General, the aggregate of discharges on surgeon's certificate will probably reach the enormous number of 200,000. The magnitude of these results illustrates the great necessity for each surgeon to discharge his duty without

fear or favor; for, although a disregard of his obligations may affect the aggregate result but slightly, there are a large number of surgeons with the same powers, the same temptations, and mayhap not a few with the same disregard of the duties and obligations of their office.

The surgeon's first duty is to the United States; his *second*, to the soldier. This is based upon the general principle that the welfare of a large number, of a community, or of a state is superior to the interests of individuals. When the rights of individuals conflict with those of the state, there can be no question as to which must be respected. Fortunately, in the discharge of soldiers for disability the respective interests do not conflict; for the right of a soldier to a discharge when disabled by wounds or disease is not less clear than that it is the interest of the United States to be rid of him. The formation of an Invalid Corps is seemingly opposed to this principle; but in reality there is exact and equal justice in making those men useful who are not wholly disabled. They perform duties which would otherwise require the employment of sound men, for which they receive adequate

pay, clothing, and subsistence, and are not the mere recipients of a public charity.

Before giving a certificate of disability for discharge, the surgeon must decide upon three questions :—

1st. Does the alleged disability really exist?

2d. Is it incurable, or can it be cured within a reasonable period?

3d. Is it sufficient to disable a man from the performance of military duty?

In many instances the surgeon will have to decide whether the disability is real. I have elsewhere treated at some length of the more usual forms of malingering in our service: it is not necessary for me to repeat what I have said on this subject; but I cannot repeat too often the injunction that no malingerer should be discharged on the ground of his pretended ailment. One case of successful imposture will increase by tenfold the number of men feigning. Simulators are too frequently successful by wearying the surgeon. When their own efforts fail, they bring to bear various influences,—the interposition and importunities of friends and relatives, and of company or regimental commanders anxious to be rid of troublesome men. I need hardly say that the surgeon cannot lend himself to the dis

charge of a man simply because he feigns and will not do duty : he must certify to a physical disability sufficient to incapacitate for service, and this disability must have a real existence.

The disease or disability must not only be real, but it must be either incurable, or curable after so long a course of treatment as practically to deprive the Government of the soldier's services. The period for which a surgeon is justified in keeping a man in hospital rather than discharge him depends upon a variety of attendant circumstances : upon the length of his service, and upon his proficiency in the drill ; upon the number of men required for military duty, and upon the facility with which men may be procured. If a man's period of service be nine months, and he have a disease or injury which will incapacitate him for service for six months, it will be better to discharge him, unless some special emergency may render his services necessary. The knowledge and experience of the soldier also affect the result ; for, obviously, that man may be retained longer who can go from the hospital to the field without preliminary instruction in the drill and in the duties of a soldier. The longer the period of service, the less numerous the voluntary enlistments, the more

thoroughly instructed are the men admitted into the hospital, and the more valuable their services to the Government. In the regular service, the period of enlistment being for five years, discharges should not be granted for curable diseases with the same facility as in the volunteer service. Ordinarily, in the regular service certificates of disability should be given only for incurable disorders, injuries, or deformities.

Is the disability sufficient to disable the man from the performance of military duty? This is an important question, not easily decided. In a great variety of injuries, and in some obscure forms of disease especially, the determination cannot be made with certainty, because there are so many circumstances, whose precise importance cannot be estimated, influencing the result. These circumstances are the seat and character of the lesion, the degree in which the disability really exists, and the extent to which it is increased by the voluntary efforts of the patient. In many instances there may be no difficulty whatever. The disease may be so well pronounced or so far advanced, and the wound or injury may be followed by such evident imperfections, deformity, or loss of function, as in either case

to admit of no reasonable doubt of the soldier's unfitness for military service. A disability completely disabling is more easily recognized than unfitness for field-service merely. In examining men for admission into the Invalid Corps, unfitness for field-service, and capability of performing the duty required of the Invalid Corps, are the questions to be determined. Previous to the organization of this corps, men unfit for field-service were almost invariably discharged.

CHAPTER II.

INVALID CORPS.

PARAGRAPH 10 of General Orders No. 36 of 1862, from the War Department, authorized the "chief medical officer in each city" (medical director) "to employ, as cooks, nurses, and attendants, any convalescent, wounded, or feeble men who can perform such duties, instead of giving them discharges;" but this regulation, from causes which it is not necessary at this time to relate, proved to be inapplicable, and was practically ignored. By General Orders 69 of 1863, from the War Department, General Orders 36 of the previous year was modified as follows:—

"At every U. S. general hospital, the feeble and wounded men unfit for field-duty, but not entirely disabled, instead of being discharged, will be organized and mustered in detachments under the charge of the officers acting as military commanders, who will assign men to them from time to time, on the reports of the surgeons in charge of hospitals. From these

invalid detachments the military commanders will make details for provost, hospital, and other necessary guards, for clerks, hospital attendants, nurses, cooks, and other extra-duty men.

* * * * *

“Should any of the men become fit for duty with their regiments, they will be immediately sent to join them.”

In these orders the formation of an Invalid Corps was foreshadowed; but the separation of it from the company and regimental organization was not contemplated until the publication of General Orders 105 of 1863, which authorized the organization of an “Invalid Corps,” as follows:—

“This corps shall consist of companies, and, if it shall hereafter be thought best, of battalions. The companies shall be made up from the following sources,—viz.:

“First, by taking those officers and enlisted men of commands now in the field (whether actually present or temporarily absent) that, from wounds received in action or diseases contracted in the line of duty, are unfit for field-service, but are still capable of effective garrison-duty, or such other light duty as may be required of an invalid corps.

* * * * *

“Second, by taking those officers and enlisted men still in service and borne on the rolls, but who are absent from duty in hospitals or convalescent camps, or are otherwise under the control of medical officers.

* * * * *

“Third, by accepting those officers and enlisted men who have been honorably discharged on account of wounds or disease contracted in the line of duty, and who desire to re-enter the service.”

The officers and men of the first class must fulfill the following conditions :—

“1. That they are unfit for active field-service on account of wounds or disease contracted in the line of duty,”—this fact being certified by a medical officer in the service, after personal examination.

“2. That they are fit for garrison-duty,”—this fact being likewise certified by the medical officer, as above, after personal examination.

“3. That they are, in the opinion of their commanding officers, meritorious and deserving.” This fact is certified on the rolls of such enlisted men or officers by intermediate commanders.

“The rolls of men for the Invalid Corps, prepared by commanders of convalescent

camps, commanders of invalid detachments, and medical officers in charge of hospitals or depots of convalescents" (second source), "shall, as soon as made out, be forwarded to the Provost-Marshal General *direct*." (General Orders No. 173, War Department, 1863.)

The third requirement mentioned above is mainly applicable to officers. Obviously, the commander of a convalescent camp or depot of convalescents or general hospital has no means of arriving at accurate knowledge of the circumstances under which the wound or disability occurred, or of the meritorious character of the man.

Men derived from the third source—viz.: "those honorably discharged on account of wounds or disease contracted in the line of duty"—must fulfill the following conditions:—

"1. The applicant must produce the certificate of the surgeon of the board of enrolment for the district, that he is unfit for active field-duty on account of wounds or disease, and is not liable to draft, but is fit for garrison-duty.

"2. He must furnish evidence of honorable discharge on account of wounds or disability contracted in the line of duty.

"3. He must produce recommendations from the regimental, brigade, and division com-

manders under whom he formerly served, that he is worthy of being thus provided for, and capable of returning adequate service to the Government." This requirement is intended to apply to invalid officers. "Enlisted men honorably discharged on account of disability, desiring to re-enlist in this corps, will present themselves to the board of enrolment for the district in which they reside, for examination by the surgeon thereof, who shall examine them and report the result to the board." If the applicant fulfill the conditions specified below, the board shall give him a certificate to that effect, viz.:—

"1st. That he is unfit for service in the field.

"2d. That he is fit for garrison-duty.

"3d. That he is meritorious and deserving.

"4th. That he was honorably discharged from the service.

"The acting Assistant Provost-Marshal General shall procure such evidence of service and good character as he may deem sufficient; and, if satisfied that it is a meritorious case, and that the man is not intemperate, he will have him enlisted."*

* Circular No. 21, Provost-Marshal General's Office, War Department, 1863.

Garrison-duty, it will be seen, is the standard. Unfitness for field-service, acquired in the line of duty, and meritorious and deserving conduct, are the conditions of admission.

“Men enlisted in or transferred to the Invalid Corps will be subject to the Articles of War, Army Regulations, &c., the same as other soldiers, and will be required to perform all duties within the limit of their physical capacity, as laid down in the rules and regulations for that corps; but, for the convenience of service, they will be selected for two grades of duty. Those who are most efficient and able-bodied, and capable of using the musket, and performing guard-duty, light marches, &c. &c., will be assigned to companies of the first battalion. Those of a minor degree of physical efficiency, or who possess special qualifications as cooks, nurses, or clerks, and whose services are required in hospitals, will be assigned to the companies of the second battalion.

“Companies of the first battalion will be employed mainly as provost-guards and garrisons for cities, public buildings, and other important points. They will be armed with muskets, and not liable to active campaigns with the field armies.

“Companies of the second battalion will be

armed with side-arms only, and will be employed in hospitals as cooks, nurses, clerks, orderlies, &c., and as guards to hospitals or other public buildings.”*

It is obvious that the second source of supply for the Invalid Corps will be the principal one,—viz.: the general hospitals and convalescent camps. “Medical inspectors, surgeons in charge of hospitals, military commanders, and all others having authority to discharge under existing laws and regulations, are forbidden to grant discharges to any men under their control who may be fit for service in the Invalid Corps.” (General Orders No. 105, War Department, 1863.) By General Orders No. 173, War Department, 1863, General Orders No. 105 was so far modified as not to include officers in the prohibition to discharge any man on surgeon’s certificate of disability who may be fit for service in the Invalid Corps.

General Order 173 further requires that “hereafter, in giving discharges to officers and soldiers on account of disability, their discharge-papers must always state whether at the time of discharge the officer or soldier was or was not *physically* suitable to enter or re-enlist in

* Extracted from General Order No. 212, 1863.

the Invalid Corps." It will thus be seen that the surgeon has to determine the fitness of a man for the Invalid Corps as to his physical qualities: he has nothing to do with the question of the merits or demerits of the invalid.

"The rolls of men for the Invalid Corps, required by General Orders Nos. 105 and 173, current series from this Department, will state in each case the nature of the disability, and the battalion for which the men are qualified.

"In all general hospitals and convalescent camps, these rolls will be prepared, and sent direct to the Provost-Marshal General, immediately after each regular muster. Convalescents will be required to perform such hospital or military duty as they are capable of, until such time as the medical officer in charge can decide finally whether they are fit for duty with regiments, for transfer to the first or second battalion of the Invalid Corps, or proper subjects for discharge on surgeon's certificate.

"The physical examination of men for the Invalid Corps must be made by the surgeon in charge before they are reported to the Provost-Marshal General."*

* Extracted from General Order No. 212, 1863.

CHAPTER III.

PHYSICAL INFIRMITIES THAT INCAPACITATE ENLISTED MEN FOR FIELD-SERVICE, BUT DO NOT DISQUALIFY THEM FOR SERVICE IN THE "INVALID CORPS."

"In executing the provisions of General Orders No. 105, from the War Department, in regard to the selection of men for the Invalid Corps, medical inspectors, surgeons in charge of hospitals, camps, regiments, or of boards of enrolment, military commanders, and all others required to make the physical examination of men for the Invalid Corps, will be governed in their decision by the following lists of qualifications and disqualifications for admission into this corps :"—

1. Epilepsy, if the seizures do not occur more frequently than once a month, and have not impaired the mental faculties.
2. Paralysis, if confined to one upper extremity.
3. Hypertrophy of the heart, unaccompanied

by valvular lesion. Confirmed nervous debility, or excitability of the heart, with palpitation, great frequency of the pulse, and loss of strength.

4. Impeded respiration following injuries of the chest, pneumonia, or pleurisy; incipient consumption.

5. Chronic dyspepsia, or chronic diarrhoea, which has long resisted treatment; simple enlargement of the liver or spleen, with tender or tumid abdomen.

6. Chronic disorders of the kidneys or bladder, without manifest organic disease, and which have not yielded to treatment; incontinence of urine. Mere frequency of micturition does not exempt.

7. Decided feebleness of constitution, whether natural or acquired. Soldiers over fifty and under eighteen years of age are proper subjects for the Invalid Corps.

8. Chronic rheumatism, if manifested by positive change of structure, wasting or contraction of the muscles of the affected limbs, or puffiness or distortion of the joints.

9. Pain, if accompanied with manifest derangement of the general health, wasting of a limb, or other positive sign of disease.

10. Loss of sight of right eye; partial loss

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of sight of both eyes, or permanent diseases of either eye affecting the integrity or use of the other eye, vision being impaired to such a degree as clearly to incapacitate for field-service. Loss of sight of left eye, or incurable diseases or imperfections of that eye, not affecting the use of the right eye, nor requiring medical treatment, do not disqualify for field-service.

11. Myopia, if very decided, or depending upon structural change of the eye; hemeralopia, if confirmed.

12. Purulent otorrhoea; partial deafness, if in degree sufficient to prevent hearing words of command as usually given.

13. Stammering, unless excessive and confirmed.

14. Chronic aphonia which has resisted treatment,—the voice remaining too feeble to give an order or an alarm, but yet sufficiently distinct for intelligible conversation.

15. Incurable deformities of either jaw sufficient to *impede*, but not to *prevent*, mastication or deglutition. Loss of a sufficient number of teeth to prevent proper mastication of food.

16. Torticollis, if of long standing and well marked.

17. Hernia; abdomen grossly protuberant; excessive obesity.

18. Internal hemorrhoids; fistula in ano, if extensive or complicated with visceral disease; prolapsus ani.

19. Stricture of the urethra.

20. Loss or complete atrophy of *both* testicles, from any cause; permanent retraction of one or both testicles within the inguinal canal.

21. Varicocele and cirsocele, if excessive or painful; simple sarcocele, if not excessive nor painful.

22. Loss of an arm, forearm, hand, thigh, leg, or foot.

23. Wounds or injuries of the head, neck, chest, abdomen, or back, that have impaired the health, strength, or efficiency of the soldier.

24. Wounds, fractures, injuries, tumors, atrophy of a limb, or chronic diseases of the joints or bones that would impede marching or prevent continuous muscular exertion.

25. Anchylosis of the shoulder, elbow, wrist, knee, or ankle joint.

26. Irreducible dislocation of the shoulder, elbow, wrist, or ankle joint, in which the bones have accommodated themselves to their new relations.

27. Muscular or cutaneous contractions from

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wounds or burns, in degree sufficient to prevent useful motion of a limb.

28. Total loss of a thumb; loss of ungual phalanx of right thumb; permanent contraction or permanent extension of either thumb.

29. Total loss of any two fingers of the same hand.

30. Total loss of index finger of right hand; loss of second and third phalanges of index finger of right hand, if the stump is tender or the motion of the first phalanx is impaired. Loss of the third phalanx does not incapacitate for field-service.

31. Loss of the second and third phalanges of all the fingers of either hand.

32. Permanent extension or permanent contraction of any finger, except the little finger; all the fingers adherent or united.

33. Total loss of either great toe; loss of any three toes on the same foot; all the toes joined together.

34. Deformities of the toes, if sufficient to *prevent* marching.

35. Large, flat, ill-shaped feet, that do not come within the designation of *talipes valgus*, but are sufficiently malformed to prevent marching.

36. Varicose veins of inferior extremities, if

large and numerous, having clusters of knots and accompanied with chronic swellings.

37. Extensive, deep, and adherent cicatrices of lower extremities.

Soldiers having nervous debility, or excitability of the heart, impeded respiration from curable causes, chronic dyspepsia, chronic diarrhoea, chronic disorders of the kidneys or bladder, incontinence of urine, aphonia, hemeralopia, or other disease or infirmity not incurable, are not to be recommended for the Invalid Corps until they have been under medical treatment or observation a sufficient length of time to make it extremely probable, if not certain, that they will not be fit for active field-service during any considerable portion of their period of enlistment.

Soldiers who have lost an arm, forearm, hand, thigh, leg, or foot, may be discharged from the army on surgeon's certificate, if they so elect.

None of the foregoing disabilities disqualify officers for service in the Invalid Corps; but some of them may be so aggravated or complicated as to unfit for any service: all such cases should be discharged.

In all cases where the physical infirmities of officers or enlisted men come within the pro-

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visions of the above list, they will be recommended for transfer to, or enlistment in, the Invalid Corps; but no one will be admitted into this corps whose previous record does not show that he is meritorious and deserving, and that he has complied with the provisions of General Orders No. 105, War Department, Adjutant-General's Office, 1863, authorizing an Invalid Corps.*

* Extracts from General Order No. 212, 1863.

CHAPTER IV.

PHYSICAL INFIRMITIES THAT DISQUALIFY ENLISTED MEN FOR SERVICE IN THE INVALID CORPS.*

1. MANIFEST imbecility or insanity.
2. Epilepsy, if the seizures occur more frequently than once a month and have obviously impaired the mental faculties.
3. Paralysis or chorea.
4. Organic diseases of the brain or spinal cord; of the heart or lungs; of the stomach or intestines; of the liver or spleen; of the kidneys or bladder, so extensive and long-continued as to have seriously impaired the general health, or so well marked as to leave no reasonable doubt of the man's incapacity for service in the Invalid Corps.

NOTE.—This paragraph is intended to apply to incurable organic diseases of severe character, rendering a man useless for any purpose in the military service, or organic diseases of equal severity, curable, but curable after so long a course of treatment as practically to render the man useless during his period of enlistment.

* Extracts from General Order No. 212, 1862

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5. Confirmed consumption, cancer, aneurism of important arteries.

6. Inveterate and extensive disease of the skin.

7. Scrofula, or constitutional syphilis, which has resisted treatment and seriously impaired the general health.

8. Habitual or confirmed intemperance, or solitary vice, sufficient in degree to have materially enfeebled the constitution.

9. Great injuries or diseases of the skull, occasioning impairment of the intellectual faculties, epilepsy, or other serious nervous or spasmodic symptoms.

10. Total loss of sight; partial loss of sight of both eyes, and permanent diseases of either eye affecting the integrity and use of the other eye, vision being so greatly impaired as to leave no reasonable doubt of the man's incapacity for service in the Invalid Corps.

11. Loss of nose, or deformity of nose, if sufficient seriously to obstruct respiration; ozoena, if dependent upon caries.

12. Deafness.

13. Dumbness; permanent loss of voice.

14. Total loss of tongue, partial loss, and hypertrophy or atrophy, of tongue, if sufficient

to make the speech unintelligible and prevent mastication or deglutition.

15. Incurable deformities of either jaw, whether congenital or produced by accident, which would prevent mastication or greatly injure the speech.

16. Tumors of the neck impeding respiration or deglutition; fistula of larynx or trachea.

17. Deformity of the chest, sufficient to impede respiration or to prevent the carrying of arms and military equipments; caries of the ribs.

18. Artificial anus; severe stricture of the rectum.

19. Total loss, or nearly total loss, of penis; epispadia or hypospadia, at the middle or nearer the root of the penis; stone in the bladder.

20. Incurable permanent organic stricture of the urethra, in which the urine is passed drop by drop, or which is complicated by disease of the bladder; urinary fistula.

21. Confirmed or malignant sarcocele; hydrocele, if complicated with organic disease of the testes.

22. Excessive anterior or posterior curvature of the spine; caries of the spine; lumbar abscess.

23. Anchylosis of hip-joint.

24. Irreducible dislocations of hip or knee joint.

25. Large chronic ulcers of lower extremities.

In all cases where the physical infirmities of an officer or enlisted man come within the provisions of this list, or where his previous record shows that he is not entitled to be received into the Invalid Corps, he will, if in service, be discharged; and, if an applicant to re-enter, his application will be disapproved.

CHAPTER V.

CAUSES OF DISCHARGE ON SURGEON'S CERTIFICATE.

THE disqualifications for service in the Invalid Corps, which are adequate causes for discharge, have been given in the preceding chapter. To form an intelligent judgment, these disqualifications must be compared with the general and special disqualifications discussed in Section I. of this work. A cause of exemption under the enrolment act, or for rejection in the examination under the recruiting regulations, is not a cause sufficient for discharge, unless it disqualifies for service in the Invalid Corps.

The character, duration, and gravity of diseases or injuries, and the extent to which they impair the health, strength, or efficiency, require further elucidation.

Previous to the organization of the Invalid Corps, the importance of the ailments for which men were discharged from the service bore no fixed relation to the number of discharges. To

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ascertain the relative frequency of the causes of discharge on surgeon's certificate, I examined 15,500 certificates as they were recorded in the Adjutant-General's Office, Washington.

There were discharged—

For disqualifications due to age.....	388
“ “ “ natural feebleness of constitution	209
“ “ “ mental infirmities.....	154
“ “ “ cachexies.....	411
“ “ “ moral character	44
“ “ “ general debility.....	1273
“ diseases and injuries of organs of special sense and accessory apparatus.....	619
“ diseases and injuries of head and spinal column and cerebro-spinal nervous system	1765
“ diseases and injuries of neck and contained organs (the discharges for APHONIA amounting to 28).....	45
“ diseases and injuries of chest and thoracic organs.....	3593
“ “ “ “ abdomen and digestive apparatus	2840
“ “ “ “ genito-urinary apparatus.....	560
“ “ “ “ upper and lower extremities..	1361
“ “ “ “ skin and appendages.....	11
“ gunshot wounds.....	1556
Injuries were received requiring discharge, but the locality and character of the injuries were not stated, in	595
For feigned disease.....	4
Unclassified.....	272
Total.....	15,500
The degree of disability was stated in.....	4588
“ “ “ “ not stated in.....	10,912

If the reader will refer to Section II. of this work, he will find that the statistics of dis-

charges which have relation to the question of malingering have been given in that connection. I have had occasion to remark that those diseases were most frequently feigned which were most prevalent. The above numerical statement seems to support this view. The class containing the largest number of discharges contains also the diseases most commonly feigned. Besides the feigned, these numbers represent a considerable proportion of cases curable within a reasonable period. Many of the cases discharged for "general debility" are of this character.

Following the general plan pursued in other parts of this work, I have to consider the subject of the extent to which diseases or injuries impair a man's capacity for military service:—
1st, The general physical disqualifications; and
2d, The special physical disqualifications, classified according to the regions of the body in which they occur.

MENTAL INFIRMITY.—The mental disease which is a ground of discharge is not the same as that condition of the intellect which justifies exemption or rejection. The insanity or imbecility must be *manifest*. This excludes the class of feeble-minded men not actually imbecile or insane, but who are nevertheless unable

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to learn the drill and duties of a soldier. The 154 cases of discharge for mental disease included in the foregoing table contain several of this class.

Discharges from the army should never take place for mental infirmity. Paragraph 169, General Regulations of the Army, prohibits the discharge of insane soldiers, but requires "that they be sent under proper protection by the department commander to Washington, for the order of the War Department for their admission into the Government Asylum."

MORAL OBLIQUITY cannot be held a legitimate ground of discharge on surgeon's certificate, notwithstanding the records of the Adjutant-General's Office, as far as examined by me, show 44 discharges for this cause.

FEEBLENESS OF CONSTITUTION.—This term includes extremes of age, cachexies, imperfect development, and the cases of general debility occurring after a great variety of ailments. The decision is to be made on three points:—Is the case curable? does it unfit for field-service? does it disqualify for service in the Invalid Corps?

Age, ordinarily, does not disqualify for service in the Invalid Corps; but it is obvious that a man may be so decrepit or so imper-

fectly developed as to be unfitted for any duty. The cachexies (scrofula, cancer, constitutional syphilis, &c.), intemperance, and masturbation are causes of discharge, if the constitution be "*materially enfeebled*." The determination of the degree to which these cachexies and vices have unfitted a man for any duty in the military service must be made by the surgeon. Usually it will be found that these infirmities, except cancer, are not so severe as to prevent a man serving in some capacity in the first or second battalion of the Invalid Corps.

If the lymphatic glands be suppurating, and if there be considerable emaciation and loss of power, the case of scrofula will justify discharge. Syphilitic affections of the mucous membranes, nodes and caries, severe syphilides, and wasting of the tissues, not amenable to treatment, and of long standing, render the subject of them unfit for either battalion of the Invalid Corps.

Drunkenness and masturbation,—especially the former,—if confirmed habits, affecting the intellectual powers and producing serious organic mischief, require discharge.

In all these physical disqualifications the question arises as to the degree and extent, rather than as to the kind, of disability. For instance, "*incipient phthisis*" is not a disquali-

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fication for service in the Invalid Corps ; but, nevertheless, organic disease of the lungs, sufficient in degree to produce serious impairment of the health, strength, or efficiency, is a disqualification requiring discharge.

CLASS FIRST.

ORGANS OF SPECIAL SENSE, AND ACCESSORY APPARATUS.

THE principle I have enunciated in the last paragraph of the preceding section applies with equal propriety to the special physical disqualifications, and is especially true of Class First. The organs of special sense may be impaired by the same disease, either to a very limited degree or wholly.

Deafness requires discharge ; purulent otorrhoea disqualifies for field-service. The extent of loss of hearing is not easily estimated ; but to constitute an incapacity for any service it must be complete.

The battalion of the Invalid Corps to which a deaf man may be assigned will be indicated

by the extent of his infirmity,—the more nearly complete use of the organ for the first battalion, and moderate deafness for the second: complete deafness requires discharge. The importance of the other disqualifying diseases of the ear must be estimated in the same way.

Loss of sight from any cause. The right eye, being principally required by the soldier, must be perfect in all its functions. Minor defects of the left can scarcely be considered disqualifications for field-service. Total loss of sight of left eye, or any serious acute disease impairing its functions, would unfit a soldier for the performance of his whole military duty. The kind of service in the Invalid Corps to which a man may be assigned will depend upon the degree of impairment of the function of sight.

As a rule, it may be assumed that acute diseases and chronic diseases of a painful character require treatment in the hospital, and unfit for any kind of duty.

Incurable diseases affecting the integrity and use of the eye require discharge from the service. The list of incurable diseases, in a literal sense, will be large or small according to the skill of the surgeon; but the term “incurable diseases” is meant to include such lesions as

conical cornea, opacities of the cornea preventing useful vision, long-standing chronic ophthalmia complicated with loss of lashes, entropion, ectropion, &c., the affections of choroid and retina known as amaurosis, and others of like character and severity.

The affections of the nose which unfit for every species of military duty are ozoena when due to caries, and such loss or deformity of nose as will "seriously obstruct respiration." These deformities include loss by malignant diseases, large polypi, or other tumors. The extent of interference in function, and the curability after a reasonable period, or incurability, enter into the question of discharge.

The injuries and deformities of the mouth which demand discharge consist of dumbness, loss of, or mutilation of, tongue, hypertrophy or atrophy of the organ, diseases or deformities of the jaw, whether the result of accident or disease, sufficient to make the speech unintelligible or prevent mastication or deglutition. Stammering, fissures of the palate, extensive loss of teeth, fistula, &c., which unfit a soldier for field-service, do not unfit him for the battalions of the Invalid Corps. The question of discharge is decided by the degree of interference of these various lesions in the import-

ant functions of mastication, speech, and deglutition; for some of the causes of discharge above given may be so limited in degree as not to render a man unfit for every species of military duty.

CLASS SECOND.

HEAD AND SPINAL COLUMN AND CEREBRO-SPINAL NERVOUS SYSTEM.

THOSE injuries and diseases of the skull require discharge which have produced impairment of the intellectual faculties, epilepsy, or nervous disorders.

The operation of trephining, considerable fractures, or loss of substance of the cranium, usually unfit for field-service, even if unaccompanied by lesions of the brain, on account of the great probability of subsequent brain-trouble from exposure to the unfavorable hygienic conditions of the camp and field. Curvature of spine dependent upon caries of the vertebræ, or abscess resulting from such disease, are undoubted causes for discharge. Gibbosity unfits for field-service, but if uncomplicated with disease of the vertebræ does not disable

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a man for service in the second battalion of the Invalid Corps. Fractures and dislocations of the vertebræ require discharge.

Epilepsy which has impaired the faculties, whether the *petit-mal* or *grand-mal*, *hemiplegia* or *paraplegia*, and *paralysis agitans*, unfit a man for service in either battalion of the Invalid Corps, and justify discharge. Epilepsy occurring not more frequently than once a month unfits for field-service and disqualifies for the first battalion of the Invalid Corps, but not for the second. Paralysis of one upper extremity is not a disqualification for the second battalion ; but paralysis of a lower extremity requires discharge from service. Chorea, if severe, renders the subject of it unfit for any duty.

CLASS THIRD.

NECK AND CONTAINED ORGANS.

Fistula of larynx or *trachea*, and *tumors impeding respiration* or *deglutition*, require discharge. A *goitre* may produce these effects, if large enough, and if it have undergone osseous degeneration. *Dysphagia*, when a symptom of stricture of the oesophagus, not

nervous or hysterical in character, and due to the pressure of tumors, to thickening of the mucous membrane, or to the contraction of cicatrices, disqualifies for service in any capacity. *Extensive cicatrices of the neck* following injuries of any description, which produce retraction of the lower jaw and lip, and permanent rigidity in degree sufficient to prevent mastication, unfit for service in the Invalid Corps, and are sufficient causes for discharge.

CLASS FOURTH.

CHEST AND THORACIC ORGANS.

Phthisis and "heart disease" are the most frequent causes of discharge, and are probably often feigned. "Incipient phthisis" does not authorize discharge: it must be "confirmed." The heart disease, to render a discharge necessary, must consist of valvular lesion. Other affections of the heart which incapacitate for field-service do not disqualify for service in the Invalid Corps.

The injuries, deformities, or diseases of the thoracic walls for which a discharge may be necessary must be sufficient in extent to

seriously impair the functions or prevent the carrying of arms and military equipments. Less important lesions unfitting for field-service will justify transfer to the Invalid Corps, rather than discharge. *Dropsical accumulations dependent upon heart disease or aneurisms* of important arteries require discharge.

The lesions of the thoracic organs requiring discharge are comprised in paragraph 4 of the physical infirmities that disqualify for service in the Invalid Corps. This "organic disease" of the heart or lungs must be sufficient in degree to interfere manifestly and seriously with the proper functions of those organs and to have impaired the general health.

CLASS FIFTH.

ABDOMEN AND DIGESTIVE APPARATUS.

ALL diseases of the abdominal viscera sufficient for discharge must consist of some structural change so far interfering with assimilation or producing such important local effects as to render a man useless. The abdominal diseases most prevalent in our army are chronic diarrhoea and dysentery. In the 15,500 dis-

charges on surgeon's certificate there were 1210 for these diseases. They undoubtedly unfit for field-service, but not necessarily for the Invalid Corps.

Chronic diarrhoea and *dysentery* of long standing, accompanied by great emaciation, unfit for any kind of duty. The question is one of severity and extent of the disease. The same principles apply to all other forms of disease of the abdominal viscera. Some are absolutely and others relatively disabling. The absolutely disabling obviously require discharge; the relatively disabling must be assigned to the battalions of the Invalid Corps according to the degree of their efficiency. To the former belong *artificial anus* and *severe stricture of the rectum*; to the latter, *dyspepsia*, *chronic gastritis*, *chronic gastro-enteritis*, *chronic diarrhoea* and *dysentery* not too far advanced, and other diseases of like character.

CLASS SIXTH.

GENITO-URINARY APPARATUS.

THE absolute disqualifications of this class consist of those *lesions of the penis and urethra*

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in which the passage of urine takes place so near to the body as to soil the person and clothing at each discharge (*loss of penis, hypospadia, and epispadia*), of those lesions of the urethra—usually complicated with disease of the bladder, and sometimes with fistulous openings (*urinary fistula*)—which prevent the flow of urine except drop by drop (*permanent organic stricture*), *of stone in the bladder*, and of *certain organic diseases of the testes (confirmed and malignant sarcocele, hydrocele if complicated with disease of the testes)*.

CLASS SEVENTH.

UPPER AND LOWER EXTREMITIES.

BUT few of that large list of injuries and diseases of the extremities which disqualify for service in the field unfit for service in the Invalid Corps. The only infirmities of the latter are of the lower extremity,—viz.: ankylosis of hip joint, irreducible dislocations of knee or hip joint, and large chronic ulcers of lower extremities. Loss of either and upper or lower extremity does not disqualify; but if a man so elect, he may be discharged. Artificial

limbs are now made with such skill and adaptation of means to the end that a maimed soldier provided with one is capable of very useful service in the second battalion.

CLASS EIGHTH.

SKIN AND APPENDAGES.

AFFECTIONS of the skin demanding discharge must be "inveterate and extensive." These adjectives are meant to apply to incurable skin-diseases not only extensive, but repulsive and accompanied by serious affections of the organism.

GUNSHOT WOUNDS.—The proportion of discharges for gunshot wounds amongst the discharges for all causes has been, in the statistics I have examined, 10 per cent. The extent to which these lesions disabled varied greatly, ranging from the loss of a little finger to the loss of a lower extremity at the upper third.

Gunshot wounds of the head involving the cranium usually require discharge; for serious impairment of the faculties, or nervous and spasmodic symptoms, frequently follow such

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lesions. Wounds of the chest, not implicating the organs, do not disqualify for service in the invalid battalions, and if flesh wounds merely do not disqualify for field-service. Gunshot fracture of clavicle, and fracture of ribs, followed by necrosis, unfit for field-service. Wounds of the lungs disqualify for field-service and for the first battalion of the Invalid Corps, but not for the second, unless followed by collapse of lung, empyema, or similar important lesions.

Gunshot wounds of muscular wall of the abdomen, if considerable in extent, require admission into the invalid battalions. Penetrating or perforating wounds with lesion of the intestine, although usually fatal, are not invariably so. They require discharge.

Wounds of genital and urinary organs are disqualifying according to the extent of injury. Loss of both testes unfits for field-service. Injuries of urethra producing epispadia or hypospadia, or loss of more than half of the penis, require discharge.

Simple flesh-contusions and wounds of upper and lower extremities are apt to result in "muscular contraction, and consequent loss of use and power in the arm, resulting from the patient's keeping the wounded limb in one

particular position for months. This system of nursing their wounded limbs is brought about by trying at first to save themselves pain on any attempt at motion being made, and also from an idea that if they are invalided for a wound received in action they will be granted a higher pension than for any other disability.”*

These remarks are applicable in their fullest significance to the wounded in our service. Previous to the organization of the Invalid Corps, large numbers of discharges were granted for these muscular contractions. At present many of these cases require admission into the Invalid Corps, or discharge; but before going beyond the control of the surgeon they should be subjected to the very excellent plan of treatment recommended by Williamson.† Wounds involving the bones are much more serious. In addition to the muscular contractions, there is the impairment of use and motion due to loss of substance of the bones. The character of service to which these men may be assigned in the invalid battalions, as well as the question of discharge, will be determined by the extent of the injury and the degree in

* Williamson, Wounded from the Mutiny in India, p. 51.
Churchill, London, 1859.

† Ibid.

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which it impairs the use or functions of the part.

I have entered into this subject of the causes of discharge from the military service, considered relatively to the degree in which they incapacitate for service, in a very cursory manner, because in the first section of this work the disqualifications for military service, in that proper and enlarged sense in which this term is used, have been fully given, and because the Invalid Corps—a creation of the present war, not yet complete in the details of its organization—may have no permanent place in the military establishment. Moreover, the General Orders of the War Department, so freely quoted in this part of my work, present in very full and complete expression the details of this subject, rendering it the less necessary for me to enlarge upon it.

CHAPTER VI.

MODE OF DISCHARGING.

THERE is a very prevalent and mischievous theory abroad that a man otherwise a proper subject for discharge may, if he feel so inclined, refuse his discharge, and continue to draw his pay and allowances without rendering an equivalent to the Government. If the case be a suitable one for the exercise of his power, it is not less clearly the duty of the surgeon to recommend the discharge than it is his duty not to make his certificate until he have positively ascertained the existence of the disability. The necessity of ascertaining the willingness of a man to be discharged is devolved, by the law of 1862, only upon the Medical Inspector-General and medical inspectors. With regimental and staff surgeons it is only a question of the good of the public service. If there be those in the general or regimental hospital unfit for further military service in any capacity, there can be no question as

to the imperative duty of the surgeon to recommend the discharge.

Those not provided for in the Invalid Corps have claims to pension under the laws.

In the regimental and small post hospitals the surgeon in charge has immediate and personal knowledge of each case; but in the large general hospitals he must rely in great part upon the action of his subordinates. In every general hospital, on a form for that purpose, the surgeon in charge of a ward in which there is, in his opinion, a case suitable for discharge, should enter all the particulars of the case, describing fully and clearly the disease or injury, and the circumstances, as far as appreciable, under which it occurred. This statement of the case should be presented with the man to the surgeon in charge, who should proceed to verify by a personal examination the assistant surgeon's diagnosis and prognosis. The propriety of this examination by the surgeon in charge is obvious enough when the terms expressed in the certificate which he signs are recalled. A case requiring an unusual amount of study and prolonged examination before a decision can be made may be submitted to the arbitrament of a board of officers; but their decision must be verified by

a personal examination. Less than this will not acquit the senior surgeon of the obligations imposed by the certificate.

The surgeon's certificate must be made upon the printed blanks furnished from the Adjutant-General's Office,—no written form being valid.

“Whenever a non-commissioned officer or soldier shall be unfit for the military service in consequence of wounds, disease, or infirmity, his captain shall forward to the commander of the department, or of the army in the field, through the commander of the regiment or post, a statement of his case, with a certificate of his disability signed by the senior surgeon of the hospital, regiment, or post, according to the form prescribed in the Medical Regulations.”*

The “statement” of the company commander consists in the narration of all the facts known to him concerning the cause of the disability, the time, place, manner, and all the circumstances under which the injury occurred or disease originated or appeared. Where the facts are not known to the company commander, the certificate of any officer, or affidavit of other person having such knowledge, will

* Revised Regulations, edition of 1861.

be appended.* In the general hospital this statement may be made and signed by the surgeon, if he have the necessary data.

The surgeon certifies to the nature, extent, and degree of disability. The degree is a numerical statement of the extent to which a man is prevented earning a subsistence by *manual labor*. The wound, or disease, or injury must be described with great particularity and precision. The trade or profession of the soldier has, it will be perceived, no connection with the degree of disability or amount of pension. The decision of the surgeon must be made upon the ability of the soldier to earn his subsistence by manual labor. If this principle be kept in view, the difficulty of determining whether a man is disabled one-half, one-third, one-sixth, &c., will be greatly lightened.

When the certificate has been approved by the medical director, it will be acted upon by the military commander, to whom the authority to discharge men has been specially delegated. After having been thus acted upon, the certificate will be returned to the regimental or detachment commander, who will, if the

* Revised Regulations, edition of 1861, p. 325.

discharge is authorized by the necessary endorsement, sign the soldier's discharge, the last certificate on the "certificate of disability for discharge," and forward the certificates direct to the Adjutant-General of the army at Washington. The certificates of disability are under no circumstances to be given into the hands of the soldier. The final statements—*i.e.* the statements of pay due, of clothing account, of retained pay, of bounty, &c.—are made up from the company records and signed by the company commander. The papers given to the soldier at the time of his discharge consist of the "discharge," signed by the commander of the regiment, post, or detachment, and duplicate final statements, signed by the company commander.

This is the mode of discharging soldiers on surgeon's certificate. To recapitulate, the principal points are :—

1st. The statement of the company commander as to the circumstances connected with the occurrence of the disease, injury, or disability.

2d. The certificate of the surgeon showing the nature and extent of the disability, and his numerical estimate of the degree in which

it prevents the man earning his subsistence by manual labor.

3d. The approval of the medical director of the corps, district, or department; and

4th. The order of the military commander authorizing the discharge.

Special regulations have been made governing the discharges from general hospitals; but the above principles lie at the foundation of them all.

These regulations have varied from time to time. General Orders No. 36 of 1862 authorized a chief medical officer (medical director), to whom all the general hospitals in a city may be intrusted, and who is required to cause certificates of disability to be made out for such men as in his judgment should be discharged. He is responsible that the certificates are given for good cause and made out in proper form, giving such medical description of the case, with the degree of disability, as will enable the pension-officer to decide on any claim for pension which may be based upon them. The certificate of disability, thus prepared and signed by the chief medical officer, are acted upon by the military commander of the city, who is given the authority to discharge.

The final statements and discharge-papers

are made out under the supervision of the military commander and signed by him.

If no descriptive list of a man a fit subject for discharge has been received, the military commander is authorized to call on the company commander, in the name of the Secretary of War, promptly to furnish the military history of the man, and his clothing, money, and other accounts with the Government. Where the descriptive list cannot be procured from the company commander, the medical officer is required to apply to the Adjutant-General for such account of the man as his records furnish. To this partial roll the medical officer will add the period for which *pay is due the man since the date of muster previous to his entry into hospital*. If the descriptive list cannot be procured, either of the company commander or Adjutant-General, the order authorizes the discharge, and transportation to be furnished by the Quartermaster's Department. General Order 36 was modified by Circular No. 2 of 1863, Surgeon-General's Office, to read as follows :—"The final statements and all the discharge-papers will be made out under the supervision of the military commander and signed by him, *when the soldier is not in a United States hospital or under the charge of a*

United States surgeon. But if he is under a United States surgeon or in a United States hospital, the surgeon will in either case make out and sign the discharge and final statements after the military commander has endorsed the authority to discharge the soldier upon the usual certificates of disability." The term "United States surgeon" here used is meant to apply to medical officers of the regular army, and the staff surgeons and assistant surgeons of volunteers. The surgeon in charge of the general hospital, under these orders, has the same relation as post or regimental commander, in addition to his duty as surgeon.

1st. He makes the certificate of disability, and, if he is cognizant of the facts, signs the statement of the company commander.

2d. He forwards the certificate through the medical director to the military commander.

3d. When the authority for the discharge, endorsed on the certificate, is received, he causes to be made out and signs the discharge and final statements.

4th. If no descriptive list can be procured, he enters on the final statements the date of the soldier's entry into the hospital, and that he has no descriptive list, and calculates the

pay due from the date of the muster previous to his admission.

5th. The certificates of disability, having the date of discharge entered (which the surgeon signs) and the soldier's address added, are forwarded to the Adjutant-General, and a notification of the discharge is sent to the commander of the company to which the man belonged.

When a soldier is discharged *by reason of wounds received in battle*, he is entitled to a certain bounty. Medical officers are accordingly directed (Circular No. 8), in making out the papers of soldiers discharged for this cause, *to endorse upon both the final statements and the discharge the fact that the disability is by reason of wounds received in battle, and to sign such endorsement with their official signature.*

"Hereafter, in giving discharges to officers and soldiers on account of disability, their discharge-papers must always state whether at the time of discharge the officer or soldier was or was not physically suitable to enter or re-enlist in the Invalid Corps."*

The great importance of this subject, and the frequency of errors of greater or less magnitude, must be my apology for so much repeti-

* Circular No. 8, 1863, Surgeon-General's Office.

tion. These minute details are important, because a want of attention to them results in great inaccuracies, and consequent loss to the Government or to the soldier. Besides, the soldier deprived of his just dues is embittered against the Government, and prejudices those who might otherwise be induced to enter the military service. In addition to these reasons for accuracy there are personal considerations not to be lightly regarded. The surgeon is responsible for all payments made over his signature, and may be called upon at any future time to make good losses accruing to the Government by his ignorance or carelessness. But, more than all, there is the higher obligation which every right-minded surgeon will not forget,—the obligation to do his duty, in small things as in great, with a single eye to the PUBLIC GOOD.

GLOSSARY

OF

TECHNICAL TERMS USED IN THIS WORK.

A.

Abdominal rings.—Openings, so called, in the abdominal wall, through which the spermatic cords pass to the testicles, and through which a loop of intestine may descend, constituting one, and the most frequent, variety of hernia.

Acne rosacea.—Rose spots on the face and forehead, vulgarly called “drunkard’s blossom.”

Albuminuria.—A disease of the kidneys in which albumen is present in the urine, and general dropsy appears.

Albugo.—An opacity of the cornea,—usually the white opacity of a cicatrix.

Alopecia.—Baldness.

Amaurosis.—A term applied to loss of vision from a variety of causes.

Anæsthesia.—Abolition of sensibility, produced by inhalation of chloroform, or ether, or other agents.

Anchylosis.—Rigidity and loss of motion of a joint.

Aneurism.—Dilatation of one or more of the coats of an artery into a pouch. There are several varieties.

Aphonia.—Loss of voice.

Artificial Anus.—An opening into the intestine through which the fæces flow, instead of through the natural outlet.

Ascites.—Dropsy of the abdomen.

Asthma.—Laborious breathing occurring in paroxysms,

either spasmodic, or produced by organic disease of heart or lungs.

Atrophy.—Loss of substance, wasting, diminution of size.

Auricle.—The external ear.

Auscultation.—The science of diagnosing diseases of the chest by the sounds heard in respiration.

B.

Bronchophony.—Bronchial voice; a sound heard in auscultating the chest.

C.

Cachexy.—Ill health; a low state of the system produced by a chronic disease.

Calculus.—A urinary concretion.

Canine teeth.—The third from the median line, on both sides, next the incisors.

Caries.—Ulceration of bone.

Cataract.—An opacity of the crystalline lens or its capsule.

Cerebro-spinal nervous system.—The brain and spinal cord, and connected nerves; the nervous system of animal life, as distinguished from the sympathetic or nervous system of organic life.

Chorea.—St. Vitus' Dance. A nervous disease, the principal sign of which consists of involuntary muscular movements (jactitation).

Cirsocele.—Enlarged veins of spermatic cord.

Cleft palate.—Fissure of the palate, usually congenital, and present with hare-lip.

Cranium.—The bony wall of the head.

Cystitis.—Inflammation of the bladder, acute or chronic.

D.

• **Deglutition.**—The act of swallowing.

Dementia.—A form of mental imbecility.

Dermatophytæ.—A class of skin-diseases, due to the presence of a parasitic plant.

Diathesis.—A peculiarity of constitution, in which there is a predisposition to one kind of disease and not to another,—as the scrofulous diathesis, rheumatic diathesis, &c.

Diabetes.—A disease of the kidneys, characterized by an extraordinary flow of urine containing *sugar*.

Diphtheritis.—An unhealthy inflammation of the throat, with exudation of false membrane and ulcerations.

Dipsomania.—An insane desire for strong drink.

Discrasy.—A low state of health, produced by animal, vegetable, or mineral poison, in which the blood is mainly involved.

Dorsal.—The region of the back. *Dorsum.*—The back, as the dorsum of the hand, &c.

Dysphagia.—Difficulty of swallowing.

E.

Ectropion.—Eversion of the eyelid.

Eczema.—A skin-disease.

Emphysema.—A dilatation of the air-cells of the lungs; one of the forms of the so-called asthma.

Encanthis.—A tumor at the inner angle of the eye.

Engorgement.—Distension of the vessels of a part.

Entropion.—Inversion of the eyelid.

Epiphora.—Overflow of the tears upon the cheek, due, usually, to closure of the duct, or disease of the lachrymal sac.

Epiglottis.—Valve, situated at the base of the tongue, which closes the larynx in the act of swallowing.

Epispadia.—An opening on the dorsum of the penis, permitting the urine to escape.

Erotomania.—Madness caused by love or desire.

Esophagus.—Gullet; the canal which conveys the food to the stomach.

Eustachian tube.—Canal extending between pharynx (back part of mouth) and *tympanum*.

Exfoliation.—The removal by necrosis of a superficial plate of bone.

Exostosis.—Outgrowth of bone; a tumor of bone.

Exanthematæ.—Eruptive fevers: *e.g.* measles.

F.

Favus.—An intractable skin-disease.

Fistula Lachrymalis.—A fistulous opening communicating with the lachrymal sac, permitting a constant flow of tears.

Fistula in Ano.—An opening by the side of the anus, usually communicating with the gut.

Fistula, Bucco-nasal.—Fistulous communication between nose and mouth.

Fistula, Salivary.—Fistulous opening in the cheek communicating with duct of parotid gland or mouth, permitting the escape of saliva.

Follicles.—Crypts, or depressions, in skin or mucous membrane, lined by secreting cells.

Follicular Pharyngitis.—An inflammation of follicles of pharynx, in which they are enlarged and irritable.

Fungous tumor.—A variety of cancer.

G.

Gastritis.—Inflammation of stomach.

Gastro-Enteritis.—Inflammation of stomach and intestinal canal.

Gibbosity.—Hump-backed.

Glaucoma.—An obscure disease of the eye.

Goitre.—An enlargement of the thyroid gland, endemic in certain localities.

H.

Hæmaturia.—Bloody urine. Blood in the urine is frequently a symptom of serious organic mischief.

Hemeralopia.—Night-blindness.

Hemiplegia.—Paralysis of one-half of the body.

Hemorrhoids.—Piles.

Hermaphroditism.—Union of the two sexes in the same individual; more properly, confusion of sex.

Herpes.—A vesicular skin-disease.

Herpes Capitis.—Applied to the disease when it attacks the scalp.

Herpes Circinnatus.—Ringworm.

Hydrocele.—An accumulation of water in the sac of the scrotum.

Hypertrophy.—An abnormal increase in size.

Hypogastric region.—A term applied to a region of the abdomen beneath the navel.

Hypospadia.—An opening into the urethra on the under part of the penis, permitting the urine to escape. In *epispadia* the opening is on the upper part of the penis. They are troublesome in proportion to their nearness to the root of the organ.

I.

Ichthyosis.—A scaly skin-disease.

Incisors.—The front teeth.

Inguinal Canal.—A canal in the groin through which the testicle descends into the scrotum, and which contains the spermatic duct and vessels.

Iris.—The movable vail suspended between the anterior and posterior chambers of the eye, variously colored in different individuals.

Iritis.—Rheumatic or syphilitic forms of inflammation of the iris.

K.

Keratitis.—Inflammation of cornea.

Kleptomania.—A form of emotional insanity, characterized by an irresistible impulse to the commission of theft.

L.

Labyrinth.—A part of the internal ear.

Laryngitis.—Inflammation of larynx.

Larynx.—Organ of the voice, forming a projection in the throat known as *Pomum Adami* (Adam's apple).

Lesion.—Injury or change of structure.

Leucoma.—A white opacity of the cornea.

Lumbar region.—Region of the back immediately above the buttocks.

Lumbar abscess.—Abscess of lumbar region; usually connected with diseased spinal column.

Lupus.—Spreading and unhealthy ulcerations of the skin, chiefly about the nose and face. *Lupus devorans* and *Lupus æruginosus* are varieties.

Luxation.—Dislocation.

Lymphatic Glands.—Glands connected with lymphatic system, existing in clusters in certain localities, as in neck, groin, &c.

M.

Malingering.—from *Malingre*—is a term applied to feigning disease.

Marasmus.—Emaciation. More frequently applied to the general emaciation produced by disease of mesenteric glands.

Mastoid cells.—The *mastoid process* is a prolongation of the mastoid portion of temporal bone. This portion contains the cells; the process lies behind the ear.

Masturbation.—Onanism. Self-abuse.

Maxilla.—*Superior and inferior.* Jaw-bone.

Meatus.—A passage or canal.

Mesentery.—Folds of the lining membrane of the abdominal cavity, containing glands.

Metacarpal bones.—Bones of the hand next the wrist joint.

Metatarsal bones.—Bones of the foot next the ankle joint

Myopia.—Near-sightedness.

N.

Nares.—The nasal passages.

Nasal fossæ.—Cavities extending from before backward, communicating with anterior and posterior nares.

Nebula.—Opacity of the cornea, less dense than *leucoma*.

Necrosis.—Death of bone.

Normal.—Natural, healthy.

Noli me tangere.—Lupus of the face. (See *Lupus*.)

Nostalgia.—Homesickness.

Nyctalopia.—Day-blindness.

O.

Oedema.—Dropsical effusion into cellular tissues underneath the skin.

Ophthalmia.—*Purulent, Gonorrhæal, Catarrhal*. Forms of inflammation of the eye.

Ossification.—The conversion of a tissue into osseous substance.

Otorrhœa.—Discharge from the ear.

Ozæna.—Ulcerations, accompanied by discharge from the nose.

P.

Paralysis.—Loss of power in a part.

Paralysis agitans.—Shaking palsy.

Paraplegia.—Paralysis of the upper or lower half of the body.

Pectoriloquy.—An abnormal sound heard in certain states of disease of chest.

Pemphigus.—A vesicular skin-disease.

Phalanx.—A small bone of the fingers or toes.

Phonation.—Function of speech.

Pityriasis.—A skin-disease.

Pneumonia.—An inflammation of the lungs.

Polypus.—A tumor, usually pear-shaped, growing from a pedicle or stem.

Porriigo.—A skin-disease.

Prolapsus Ani.—Protrusion of the bowel through the anus.

Prostate Gland.—A gland situated at the neck of the bladder.

Psoriasis.—A scaly skin-disease.

Pterygion.—A fleshy growth on the globe of the eye.

Phthisis.—Pulmonary consumption.

Ptoxis.—A falling of the eyelid, with loss of voluntary control over it.

Ptyalism.—Salivation.

Purulent.—Containing pus (matter).

R.

Rales.—Abnormal sounds heard in the examination of the chest.

Rectum.—Lower bowel.

Recurrent laryngeal nerves.—Nerves supplying larynx.

Renal dropsy.—Dropsy dependent upon disease of the kidneys.

Rickets.—Constitutional disease, affecting the quantity of earthy matter in the bones.

S.

Sarcocoele.—Enlargement of the testicle.

Scirrhus.—Hard cancer.

Scorbutus.—Scurvy.

Sinus.—A cavity, or a canal.

Spina bifida.—Congenital deficiency of lower portion of spinal column.

Spermatorrhœa.—involuntary seminal emissions.

Squamæ.—A class of skin-diseases (scaly).

Staphyloma.—A protrusion on the anterior surface of the globe of the eye: *e.g.* staphyloma of the iris.

Sternum.—Breast-bone.
Strabismus.—Squinting.
Strumous.—Scrofulous.
Sutures.—Stitches.

T.

Tænia.—Tape-worm.
Tympanum.—Drum of the ear
Torticollis.—Wry-neck.
Trichiasis.—Eyelashes growing inward.

U.

Ureter.—The canal leading from the kidney to the bladder.
Urethra.—The canal through which the urine is discharged.
Urinary fistula.—Fistula communicating with the bladder or urethra, through which the urine flows.
Uvula.—The pendulous body suspended from the palate, in the posterior part of the mouth.

V.

Valvular insufficiency.—Condition of the valves of the heart, permitting the regurgitation of the blood.
Varicose veins.—Veins enlarged, prominent, and clustered in knots.
Vesiculæ.—A class of skin-diseases.

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